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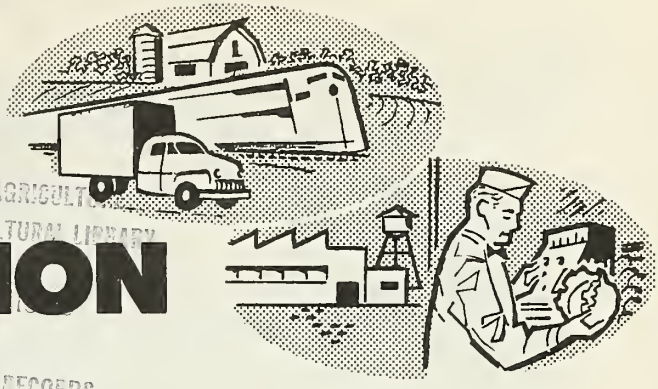
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MARKETING and TRANSPORTATION SITUATION

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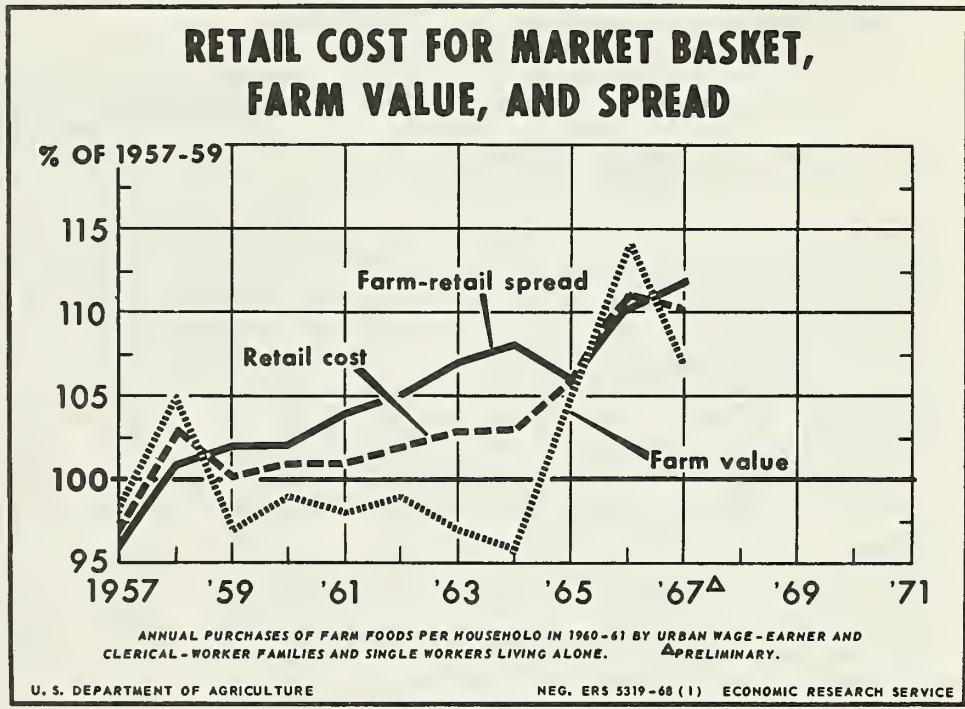


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February 1968

Prices consumers paid for a market basket of farm-originated foods declined slightly in 1967. However, retail prices did not decline as much as prices received by farmers. Less than half of the 7 percent decline in the farm value of these foods was reflected in lower retail prices to consumers. The remainder was absorbed by widening farm-retail spreads. This increase continued a long-term trend that has resulted mainly from higher costs of goods and services purchased by marketing firms.

Farmers received 38 cents of the dollar consumers spent for these products in 1967--2 cents less than the share in 1966.



IN THIS ISSUE

- Labor Productivity in Food Distribution
- The Changing Input Structure of Selected Food Processing Industries: Agriculture's Declining Share

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STATISTICAL SUMMARY OF MARKET INFORMATION

Item	Unit or base period	1966		1967			
		Year	Oct.- Dec.	Apr.- June	July- Sept.	Oct.- Dec.	
<u>Farm-to-retail price spreads</u>							
Farm-food market basket: 1/							
Retail cost	Dol.	1,095	1,097	1,069	1,093	1,084	
Farm value	Dol.	443	426	408	426	406	
Farm-retail spread	Dol.	652	671	661	667	678	
Farmer's share of retail cost	Pct.	40	39	38	39	37	
Cotton: 2/							
Retail cost	Dol.	2.21	2.24	2.26	2.28	2.32	
Farm value 3/	Dol.	.25	.21	.22	.22	.26	
Farm-retail spread 4/	Dol.	1.96	2.03	2.04	2.06	2.06	
Farmer's share of retail cost	Pct.	11	9	10	10	11	
<u>General economic indicators</u>							
Consumers' per capita income and expenditures: 5/							
Disposable personal income	Dol.	2,584	2,639	2,716	2,749	2,787	
Expenditures for goods and services	Dol.	2,366	2,395	2,463	2,484	2,507	
Expenditures for food	Dol.	472	473	483	484	488	
Expenditures for food as percentage of disposable income	Pct.	18.3	17.9	17.8	17.6	17.5	
		1966		1967			
		Year	Dec.	Oct.	Nov.	Dec.	
Hourly earnings of employees, private sector 6/	Dol.	2.55	2.59	2.71	2.72	2.71	
Hourly earnings of food marketing employees 7/	Dol.	2.40	2.44	2.53	2.55	2.56	
Retail sales: 8/							
Food stores	Mil. dol.	5,927	5,861	6,054	6,095	6,146	
Apparel stores	Mil. dol.	1,440	1,386	1,485	1,515	1,475	
Manufacturers' inventories: 8/							
Food and kindred products	Mil. dol.	6,394	6,394	6,425	6,489	6,512	
Textile mill products	Mil. dol.	2,965	3,017	3,128	3,123	3,163	
Tobacco products	Mil. dol.	2,343	2,343	2,338	2,326	2,394	
Indexes of industrial production: 9/							
Food manufactures	1957-59=100	126.6	130.2	129.3	128.9	---	
Textile mill products	1957-59=100	142.5	141.7	145.4	147.3	---	
Apparel products	1957-59=100	150.1	152.2	146.4	---	---	
Tobacco products	1957-59=100	120.0	119.3	118.0	---	---	
Index of physical volume of farm marketings	1957-59=100	121	138	176	168	---	
<u>Price indexes</u>							
Consumer price index 10/	1957-59=100	113.1	114.7	117.5	117.8	118.2	
Wholesale prices of food 11/	1957-59=100	110.7	109.8	107.5	108.0	109.1	
Wholesale prices of cotton products 10/	1957-59=100	102.5	102.7	99.1	101.2	104.2	
Wholesale prices of woolen products 10/	1957-59=100	106.0	104.8	102.8	102.2	102.2	
Prices received by farmers	1957-59=100	110	106	104	103	105	
Prices paid by farmers, interest, taxes, and wage: rates	1957-59=100	114	115	118	117	118	

1/ Contains average quantities of farm-originated foods purchased annually per household in 1960/61 by wage-earner and clerical-worker families and single workers living alone. Estimates of the farmer's share do not allow for direct Federal payments to producers, except for the value of wheat marketing certificates. 2/ Data for average family purchases in 1950 of 25 articles of cotton clothing and housefurnishings divided by number of pounds of lint cotton required for their manufacture; see U.S. Dept. Agr. Mktg. Res. Rpt. 277. 3/ Farm value does not include direct payment to farmers. 4/ The farm-retail spread does not include value of payments-in-kind certificates made to domestic users of eligible U.S. raw upland cotton. This value amounted to 6.5 cents per pound of raw cotton from April 1964 through July 1965 and 5.7 cents from August 1965 through July 1966. Beginning in August 1966, certificates were discontinued and support prices of raw cotton were reduced. 5/ Seasonally adjusted annual rates, calculated from Dept. of Commerce data. Percentages have been calculated from total income and expenditure data. 6/ Average hourly earnings of production workers in mining and manufacturing; construction workers in contract construction; nonsupervisory workers in wholesale and retail trade, finance, insurance, real estate, transportation, public utilities and services, Dept. of Labor. 7/ Weighted composite earnings in food processing, wholesale trade, retail food stores, calculated from data of Dept. of Labor. 8/ Seasonally adjusted, Dept. of Commerce. Sales data for 1966 are averages of monthly totals (unadjusted). Inventory data for 1966 are book values at end of year (adjusted). 9/ Seasonally adjusted, Board of Governors of Federal Reserve System. Index for food manufacturers substituted for previously published index for food and beverage manufacturers. 10/ Dept. of Labor. 11/ Fresh and dried fruits and vegetables, eggs, and processed foods; Dept. of Labor.

MARKETING AND TRANSPORTATION SITUATION

Approved by the Outlook and Situation Board, February 14, 1968

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SUMMARY*

The retail cost of the farm food market basket was about 1 percent lower in the fourth quarter of last year than in both the previous quarter and a year earlier. The farm value of these foods was about 5 percent below the previous quarter and a year earlier. Since returns to farmers for the market basket of domestically produced foods declined more than retail prices of these foods, the farm-retail spread widened about 2 percent in the fourth quarter of 1967 and was 1 percent wider than a year earlier.

Returns to farmers from products in the market basket of farm-originated foods dropped 7 percent in 1967, after rising sharply in 1965 and 1966. Declines in farm prices in 1967 were particularly sharp for hogs, frying chickens, eggs, fruits and vegetables for processing, and soybeans. These products accounted for most of the decline in the total farm value of the market basket. However, farm values in 1967 were lower for all product groups except dairy products and miscellaneous products.

About half of the decline in returns to farmers was reflected in lower retail food prices in 1967. The remainder of the decline was absorbed by widening marketing spreads.

The retail cost of the market basket of farm-originated foods declined about 1 percent in 1967 from the record level in

1966. Sharply lower prices for pork, frying chickens, and eggs were partially offset by higher prices for dairy products, bakery and cereal products, and miscellaneous products.

In 1967, the farmer received an average of 38 cents of the consumer's farm food dollar, 2 cents less than in 1966.

Charges for marketing farm-originated food products, as measured by the spread between the retail cost and farm value of the farm food market basket, averaged 2 percent more in 1967 than in 1966. Farm-retail spreads widened for almost all products in the market basket. Annual increases have averaged smaller in the 1960s than in the 1950s.

Many costs of marketing firms also rose in 1967, particularly in the latter half. Hourly earnings of food marketing employees averaged about 5 percent higher than in 1966. However, improvements in output per man-hour may have offset some of this increase. Prices of containers, packaging materials, transportation, and many other goods and services (not including raw material) increased. After-tax profits as a percentage of sales of food manufacturing corporations averaged slightly lower in the first 3 quarters of 1967 than in the same period of 1966. Profits of leading food chains were also down from 1966.

* The summary of this report and a summary table were released to the press on February 14, 1968.

REVISION OF MARKET BASKET SERIES

Retail prices, farm-retail spreads, and farmer's shares published in this issue for many products and product groups have been revised for 1964-67.

In September 1967, the Bureau of Labor Statistics published revised prices for July that were obtained from a revised sample of retail food stores. The sample revision involved changes in the number, location, and type of stores (chain grocery stores, large independent food stores, and small food stores) and a revision of weights assigned each store type, based on data from the 1963 Census of Retail Trade. Weights given to prices of each chain store company within cities also were changed. In addition, prices were newly "benchmarked". (For a description of "benchmarking" procedure, see Estimated Retail Food Prices by Cities, published monthly by the BLS.) As a result, revised July prices for many products were lower than those previously published, although prices for a few products were unchanged or higher.

To avoid abrupt changes in market basket data caused by a change in the level of prices, these retail prices were adjusted gradually between the last major change in the BLS sample (which occurred in December 1963) and the new July 1967 levels. Market basket statistics for 1964-67 have been revised for this reason. This gradual adjustment procedure reduced the market basket retail cost in 1966, as well as in 1967. However, the retail cost of the market basket foods declined considerably more than the BLS Food-at-Home Index, partly because of these BLS sample changes. The BLS indexes for July were based on old July prices. In calculating its indexes for August, BLS compared August prices with revised July prices. By linking in this manner, the BLS did not affect the level of its indexes.

FARM FOOD MARKET BASKET STATISTICS

4th Quarter Farm Value Drops; Retail Cost Down Slightly

The retail cost of the farm food market basket averaged \$1,084 (annual rate) in the fourth quarter of 1967, down about 1 percent from the preceding quarter (table 1). ^{1/} Declining prices--due partly to seasonal factors--for pork, frying chickens, and fresh fruits and vegetables

in the fourth quarter more than offset higher prices for dairy products and processed fruits and vegetables. Retail cost of the market basket declined during the first half of 1967 and then rose to a high for the year in the third quarter.

The retail cost of the market basket in the fourth quarter also averaged

^{1/} The market basket of farm foods contains average quantities of domestic farm-originated food products purchased annually per household in 1960 and 1961 by wage-earner and clerical-worker families and single workers living alone. Its retail value is calculated from retail prices published by the Bureau of Labor Statistics. The retail cost of the market basket is less than the cost of all foods bought per household, since it does not include the cost of meals in eating places, imported foods, sea foods, or other foods of nonfarm origin. The farm value is the return to farmers for the farm products equivalent to foods in the market basket. The farm-retail spread is the difference between the retail cost and farm value. It is an estimate of total gross margin received by marketing firms for assembling, processing, transporting, and distributing the products in the market basket.

Table 1.--The market basket of farm foods: Retail cost, farm value, and farm-retail spread, October-December 1967, July-September 1967, and October-December 1966

Items	October- December 1967	July- September 1967	October- December 1966	Change: Oct.-Dec. 1967 from			
				July-September 1967		October-December 1966	
	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Pct.</u>	<u>Dol.</u>	<u>Pct.</u>
Retail cost <u>1/</u>							
Market basket	1,083.67	1,092.85	1,096.72	-9.18	-1	-13.05	-1
Meat products	320.42	323.76	321.39	-3.34	-1	-.97	<u>2/</u>
Dairy products	197.67	195.99	197.70	1.68	1	-.03	<u>2/</u>
Poultry	45.06	46.92	46.94	-1.86	-4	-1.88	-4
Eggs	34.90	34.87	45.23	.03	<u>2/</u>	-10.33	-23
Bakery and cereal products	168.90	168.74	169.99	.16	<u>2/</u>	-1.09	-1
Fresh fruits	45.41	49.12	44.30	-3.71	-8	1.11	3
Fresh vegetables ..	65.75	70.76	65.97	-5.01	-7	-.22	<u>2/</u>
Processed fruits and vegetables ...	118.52	115.81	117.56	2.71	2	.96	1
Fats and oils	38.38	38.51	39.77	-.13	<u>2/</u>	-1.39	-3
Miscellaneous products	48.66	48.37	47.87	.29	1	.79	2
Farm value <u>3/</u>							
Market basket	405.75	426.27	425.63	-20.52	-5	-19.88	-5
Meat products	160.98	177.87	163.27	-16.89	-9	-2.29	-1
Dairy products	94.23	93.27	94.93	.96	1	-.70	-1
Poultry	19.84	22.45	22.08	-2.61	-12	-2.24	-10
Eggs	20.02	20.76	30.54	-.74	-4	-10.52	-34
Bakery and cereal products	33.49	34.04	36.70	-.55	-2	-3.21	-9
Fresh fruits	15.15	14.61	13.02	.54	4	2.13	16
Fresh vegetables ..	20.59	22.68	21.33	-2.09	-9	-.74	-3
Processed fruits and vegetables ...	22.18	21.09	22.98	1.09	5	-.80	-3
Fats and oils	10.05	10.51	11.81	-.46	-4	-1.76	-15
Miscellaneous products	9.22	8.99	8.97	.23	3	.25	3
Farm-retail spread							
Market basket	677.92	666.58	671.09	11.34	2	6.83	1
Meat products	159.44	145.89	158.12	13.55	9	1.32	1
Dairy products	103.44	102.72	102.77	.72	1	.67	1
Poultry	25.22	24.47	24.86	.75	3	.36	1
Eggs	14.88	14.11	14.69	.77	5	.19	1
Bakery and cereal products	135.41	134.70	133.29	.71	1	2.12	2
Fresh fruits	30.26	34.51	31.28	-4.25	-12	-1.02	-3
Fresh vegetables ..	45.16	48.08	44.64	-2.92	-6	.52	1
Processed fruits and vegetables ...	96.34	94.72	94.58	1.62	2	1.76	2
Fats and oils	28.33	28.00	27.96	.33	1	.37	1
Miscellaneous products	39.44	39.38	38.90	.06	<u>2/</u>	.54	1

1/ Retail cost of average quantities purchased annually per household in 1960-61 by urban wage-earner and clerical-worker families and single workers living alone, calculated from retail prices collected by the Bureau of Labor Statistics.

2/ Less than 0.5 percent.

3/ Payment to farmer for equivalent quantities of farm products minus imputed value of byproducts obtained in processing.

about 1 percent lower than a year earlier. This was due mostly to a sharp drop in the price of eggs.

The farm value of foods in the market basket averaged \$406 (annual rate) in the fourth quarter of 1967--5 percent lower than in the previous quarter (table 1). Farm value reached a high for 1967 in the third quarter. Although prices decreased for many products, meat animals accounted for most of the decline in the fourth quarter.

Compared with the fourth quarter of 1966, returns to farmers for foods in the market basket averaged about 5 percent lower in the fourth quarter of 1967. Most product groups declined, but prices of fresh fruit rose significantly.

After staying relatively stable during the first half of 1967, the spread between the retail cost and farm value of the market basket of farm foods increased in the second half. In the fourth quarter, it was 2 percent wider than in the third quarter and 1 percent wider than a year earlier. The farm-retail spread widened in the fourth quarter because the farm value of the market basket foods declined more than its cost to consumers. Meat products contributed most to the increase in marketing spreads. Prices for hogs and beef cattle averaged lower in the fourth quarter than in the third quarter, but, as usually happens, changes in the retail price of meat lagged behind changes in farm prices of meat animals.

Farmers received an average of 37 cents of the dollar consumers spend for farm-originated foods in retail food stores during the fourth quarter of last year--2 cents less than in the previous quarter and the fourth quarter of 1966.

Marketing Spreads Widened as 1967 Prices Declined

In 1967, prices consumers paid for market basket foods did not decline in proportion to the decline in prices at the farm level. In fact, less than half of the decline in returns to farmers for market basket foods was reflected in lower retail food prices to consumers. The remainder of the decline in farm value was

offset by widening marketing spreads, continuing a trend that has prevailed since the end of World War II. The farm value of market basket foods in 1967 averaged 6 percent lower than in 1947-49. The retail cost, however, was 21 percent higher because of widening farm-retail spreads.

Retail Costs: Following sharp increases in 1965 and 1966, the retail cost of the market basket foods declined to \$1,081 last year--down 1 percent from the 1966 record (table 2). Sharply lower prices for pork, frying chickens, and eggs in 1967 were partially offset by higher prices for dairy products, bakery and cereal products, and miscellaneous products.

Farm Value: The farm value of foods in the market basket dropped 7 percent in 1967 from the 1966 level (table 2). Farm values were lower for all product groups except dairy products and miscellaneous products. Declines in farm prices were particularly sharp for hogs, frying chickens, eggs, fruits and vegetables for processing, and soybeans. These products accounted for most of the decline in the total farm value of the market basket.

In 1963 and 1964, the farm value of the market basket foods was near its lowest level since World War II. It rose significantly in both 1965 and 1966, partly because of reduced supplies of some major food products. But it declined in 1967, mainly because of increased supplies. Last year was characterized by 2 periods of sharply declining prices. After declining from August 1966 through April 1967, the farm value rose sharply to a 1967 high in July (table 3). This was followed by a decline each month through November, when it reached the May level.

Farm-Retail Spreads: Marketing spreads for the market basket of farm-originated foods averaged about 2 percent wider in 1967 than in 1966 (table 2). However, farm-retail spreads have increased each year since 1950, except 1965. However, annual increases have averaged smaller thus far in the 1960s than in the 1950s. The spread has increased by an average of 1 percent per year (compound rate) so far in the 1960s, compared with 3 percent in the 1950s.

Table 2.--The market basket of farm foods: Retail cost, farm value, and farm-retail spread, annual 1967 and 1966

Items	12-month average 1967	12-month average 1966	Change: 1967 from 1966	
	Dollars	Dollars	Dollars	Percent
Retail cost ^{1/}				
Market basket	1,080.65	1,094.72	-14.07	-1
Meat products	317.23	329.65	-12.42	-4
Dairy products	196.27	189.44	6.83	4
Poultry	46.10	49.74	-3.64	-7
Eggs	35.45	42.73	-7.28	-17
Bakery and cereal products	169.05	165.70	3.35	2
Fresh fruits	44.76	44.79	-.03	<u>2/</u>
Fresh vegetables	68.52	68.85	-.33	<u>2/</u>
Processed fruits and vegetables	116.20	117.73	-1.53	-1
Fats and oils	38.79	38.70	.09	<u>2/</u>
Miscellaneous products	48.28	47.39	.89	2
Farm value ^{3/}				
Market basket	413.48	443.25	-29.77	-7
Meat products	165.43	180.34	-14.91	-8
Dairy products	93.17	89.68	3.49	4
Poultry	22.26	25.62	-3.36	-13
Eggs	20.98	28.30	-7.32	-26
Bakery and cereal products	34.98	36.45	-1.47	-4
Fresh fruits	13.61	14.32	-.71	-5
Fresh vegetables	21.94	23.26	-1.32	-6
Processed fruits and vegetables	21.09	23.98	-2.89	-12
Fats and oils	10.95	12.43	-1.48	-12
Miscellaneous products	9.07	8.87	.20	2
Farm-retail spread				
Market basket	667.17	651.47	15.70	2
Meat products	151.80	149.31	2.49	2
Dairy products	103.10	99.76	3.34	3
Poultry	23.84	24.12	-.28	-1
Eggs	14.47	14.43	.04	<u>2/</u>
Bakery and cereal products	134.07	129.25	4.82	4
Fresh fruits	31.15	30.47	.68	2
Fresh vegetables	46.58	45.59	.99	2
Processed fruits and vegetables	95.11	93.75	1.36	1
Fats and oils	27.84	26.27	1.57	6
Miscellaneous products	39.21	38.52	.69	2

^{1/} Retail cost of average quantities purchased annually per household in 1960/61 by urban wage-earner and clerical-worker families and single workers living alone, calculated from retail prices collected by the Bureau of Labor Statistics.

^{2/} Less than 0.5 percent.

^{3/} Payment to farmers for equivalent quantities of farm products minus imputed value of byproducts obtained in processing.

Table 3.--The market basket of farm foods: Retail cost, farm value, farm-retail spread, and farmer's share of retail cost, averages 1947-49 and 1957-59, annual 1957-67, monthly 1966/67 1/

Year and month	Retail cost <u>2/</u>	Farm value	Farm-retail spread	Farmer's share
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Percent</u>
Average:				
1947-49	890	441	449	50
1957-59	983	388	595	39
1957	953	380	573	40
1958	1,009	407	602	40
1959	985	377	608	38
1960	991	383	608	39
1961	997	380	617	38
1962	1,006	384	622	38
1963	1,013	374	639	37
1964	1,013	374	639	37
1965	1,038	408	630	39
1966	1,095	443	652	40
1967 <u>3/</u>	1,081	413	668	38
<u>1966 4/</u>				
January	1,069	441	628	41
February	1,090	459	631	42
March	1,098	461	637	42
April	1,095	448	647	41
May	1,086	436	650	40
June	1,088	433	655	40
July	1,094	447	647	41
August	1,115	462	653	41
September	1,111	454	657	41
October	1,107	435	672	39
November	1,093	422	671	39
December	1,090	420	670	39
<u>1967 3/ 4/</u>				
January	1,084	418	666	39
February	1,076	413	663	38
March	1,070	411	659	38
April	1,064	399	665	38
May	1,064	400	664	38
June	1,080	425	655	39
July	1,091	433	658	40
August	1,099	428	671	39
September	1,089	417	672	38
October	1,084	409	675	38
November	1,080	400	680	37
December	1,087	408	679	38

1/ Data for earlier years are published in Farm-Retail Spreads for Food Products 1947-64, ERS-226, April 1965.

2/ Retail cost for 1964-67 and some months of 1966/67 have been revised.

3/ Preliminary.

4/ Annual rates.

Operating costs of marketing firms generally were higher last year. Hourly earnings of employees in food marketing firms averaged \$2.51 in 1967--about 5 percent more than in 1966. By comparison, hourly earnings increased about 4 percent between 1965 and 1966. However, improvements in output per man-hour may have cushioned the rise in unit labor cost. The volume of products marketed continued to grow. Prices of containers, packaging materials, transportation, and other goods and services (not including raw materials) averaged slightly higher in 1967.

After-tax profits of food manufacturing corporations averaged 2.4 percent of sales in the first 3 quarters of 1967--down from 2.6 percent in a like period of 1966--according to joint reports of the Federal Trade Commission and the Securities and Exchange Commission. These reports also show that after-tax profits of dairy manufacturers declined by a similar amount to 2.4 percent of sales; however, profits for companies producing bakery products rose to 2.4 percent from 2.1 percent.

Profits after taxes of 14 leading retail food chains averaged 1.0 percent of sales in the first 9 months last year, compared with 1.2 percent a year earlier.

Farmer's Share: Since the retail cost of foods in the market basket held relatively stable, declining farm prices reduced the farmer's share of the dollar consumers spent for these foods in retail food stores in 1967. The farmer's share averaged 38 cents--2 cents less than in 1966 (table 3). Thus far in the 1960s, the annual average farmer's share has ranged from 37 to 40 cents.

How Some Commodities Fared

Marketing Spread for Pork Widens in Fourth Quarter: The farm value of pork dropped more than seasonally--about 16 percent from the third to the fourth quarter last year (table 4), responding to about the same percentage increase in commercial hog slaughter. The response at retail to this sharp decline in hog prices was sluggish--prices for pork declined only about 4 percent. As a result, the farm-retail spread increased 11 percent

in the fourth quarter to a high for the year. However, the fourth quarter spread was about the same as a year earlier.

Returns to farmers for hogs and retail prices of pork averaged lower in each quarter of 1967 than in corresponding quarters of 1966. However, the farm-retail spread averaged about the same in both years.

Farm Value of Frying Chicken Declines--Marketing Spread Widens: In response to both increased volume of chickens slaughtered and increased supplies of turkey and red meats, the farm value of frying chicken declined sharply to a record-low level in the fourth quarter last year (table 16, p. 34). As with pork, the farm value of frying chickens dropped faster than retail prices, resulting in record-large farm-retail spreads.

From the first quarter of 1967 to the fourth, the farm value of frying chicken declined each quarter, for a total decrease of 19 percent. In contrast, retail prices changed very little but farm-retail spreads widened each quarter for a total gain of about 16 percent.

Prices for Eggs Decline--Spreads Stable: Not since the second quarter of 1962 have farmers received and consumers paid so little for eggs. In each quarter last year, returns to farmers for eggs averaged lower than in 1966. A 6-percent increase in egg production accounted for much of the distress in prices received by farmers for eggs. The farm value of a dozen eggs in the fourth quarter last year was 14.6 cents less than a year earlier (table 16, p. 34). Retail prices for eggs generally followed changes at the farm level; therefore, farm-retail spreads changed little during the year or from a year earlier. In the fourth quarter of 1967, the retail price for eggs averaged 48.4 cents per dozen--the same as in the previous quarter but 14.3 cents below a year earlier, which was almost the same as the decline in the farm value.

4th Quarter Potato Prices Down From Year Earlier: A record large late potato crop seriously depressed prices in the fourth quarter last year. Consumers paid

Table 4.--Beef, pork, and lamb: Retail price, wholesale value, farm value, farm-retail spread, and farmer's share of retail price, annual 1964-67, quarterly 1966/67 1/

Date	Retail price	Wholesale	Gross	Byproduct	Net	Farm-retail spread			
	per pound 2/	value 3/	farm value 4/	allowance 5/	farm value 6/	Total	Wholesale- retail	Farm- wholesale	Farmer's share
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Percent
<u>Beef, Choice grade</u>									
1964	77.8	53.8	46.6	4.2	42.4	35.4	24.0	11.4	54
1965	81.4	57.6	51.6	4.8	46.8	34.6	23.8	10.8	57
1966	84.3	58.9	55.5	5.9	49.6	34.7	25.4	9.3	59
1967	84.1	59.7	54.3	5.0	49.3	34.8	24.4	10.4	59
<u>1966</u>									
Jan.-Mar.	84.3	60.6	57.3	6.0	51.3	33.0	23.7	9.3	61
Apr.-June	85.2	59.9	57.1	6.3	50.8	34.4	25.3	9.1	60
July-Sept.	84.1	58.2	55.1	6.1	49.0	35.1	25.9	9.2	58
Oct.-Dec.	83.5	56.8	52.5	5.4	47.1	36.4	26.7	9.7	56
<u>1967</u>									
Jan.-Mar.	82.9	57.2	53.3	5.3	48.0	34.9	25.7	9.2	58
Apr.-June	82.5	58.2	53.0	5.0	48.0	34.5	24.3	10.2	58
July-Sept.	84.9	62.4	56.5	5.1	51.4	33.5	22.5	11.0	61
Oct.-Dec.	86.0	61.1	54.5	4.8	49.7	36.3	24.9	11.4	58
<u>Pork</u>									
1964	56.3	40.0	30.7	4.0	26.7	29.6	16.3	13.3	47
1965	64.1	49.5	42.1	5.5	36.6	27.5	14.6	12.9	57
1966	73.4	54.8	47.6	6.4	41.2	32.2	18.6	13.6	56
1967	67.0	48.1	39.0	4.8	34.2	32.8	18.9	13.9	51
<u>1966</u>									
Jan.-Mar.	78.0	59.2	53.3	7.0	46.3	31.7	18.8	12.9	59
Apr.-June	72.2	53.2	46.3	6.4	39.9	32.3	19.0	13.3	55
July-Sept.	73.3	55.6	49.7	6.5	43.2	30.1	17.7	12.4	59
Oct.-Dec.	69.9	51.3	41.1	5.6	35.5	34.4	18.6	15.8	51
<u>1967</u>									
Jan.-Mar.	66.7	47.5	38.3	5.0	33.3	33.4	19.2	14.2	50
Apr.-June	65.5	47.1	38.5	4.9	33.6	31.9	18.4	13.5	51
July-Sept.	69.4	51.4	43.0	4.9	38.1	31.3	18.0	13.3	55
Oct.-Dec.	66.5	46.5	36.1	4.2	31.9	34.6	20.0	14.6	48
<u>Lamb, Choice grade</u>									
1964	73.5	52.5	46.8	7.1	39.7	33.8	21.0	12.8	54
1965	79.1	58.4	53.4	8.0	45.4	33.7	20.7	13.0	57
1966	85.6	59.8	55.5	8.4	47.1	38.5	25.8	12.7	55
1967	87.1	60.7	52.4	5.7	46.7	40.4	26.4	14.0	54
<u>1966</u>									
Jan.-Mar.	85.1	65.0	61.0	9.9	51.1	34.0	20.1	13.9	60
Apr.-June	86.2	60.5	55.9	9.2	46.7	39.5	25.7	13.8	54
July-Sept.	86.1	56.8	53.3	8.1	45.2	40.9	29.3	11.6	52
Oct.-Dec.	85.2	57.0	51.7	6.4	45.3	39.9	28.2	11.7	53
<u>1967</u>									
Jan.-Mar.	83.6	55.8	48.9	6.3	42.6	41.0	27.8	13.2	51
Apr.-June	85.3	62.1	54.9	6.2	48.7	36.6	23.2	13.4	57
July-Sept.	89.7	64.0	53.7	4.8	48.9	40.8	25.7	15.1	55
Oct.-Dec.	89.9	60.8	51.9	5.3	46.6	43.3	29.1	14.2	52

1/ Data revised.

2/ Estimated weighted average price of retail cuts.

3/ Wholesale value of quantity of carcass equivalent to 1 lb. of retail cuts: Beef, 1.35 lb.; pork, 1.00 lb.; lamb, 1.14 lb.

4/ Payment to farmer for quantity of live animal equivalent to 1 lb. of retail cuts: Beef, 2.25 lb.; pork, 2.00 lb.; lamb, quantity varies by months from 2.33 lb. in April to 2.38 lb. in October.

5/ Portion of gross farm value attributed to edible and inedible byproduct.

6/ Gross farm value minus byproduct allowance.

69.5 cents per 10 pounds of potatoes in the fourth quarter of 1967--3.1 cents less than a year earlier. Returns for an equivalent quantity at the farm level averaged 17.5 cents--down 3.6 cents from the fourth quarter of 1966. Since prices declined more at the farm level than at the retail

level, the farm-retail spread widened 0.5 cent from the fourth quarter 1966 to average 52.0 cents in the fourth quarter last year (table 17, p. 35). Prices and spreads averaged about the same in 1967 as in 1966.

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LABOR PRODUCTIVITY IN FOOD DISTRIBUTION

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Labor productivity--output per man-hour--in food distribution increased about 2.7 percent per year during 1948-63. This was about the same as the increase for the private nonfarm sector of the economy, but less than for the farm sector. The increase for food distribution was the result of a 2.4 percent per year increase in net output and a small decrease in man-hours. Distribution costs per unit of net output increased 52 percent from 1948 to 1963; unit labor costs rose 23 percent; and unit nonlabor costs increased 97 percent. The implicit price deflator for the private economy increased 30 percent.

Comparison of productivity trends in various industries can partially explain trends in unit costs and prices. Moreover, productivity is one indicator of market performance for an industry.

Rapidly increasing productivity usually is accompanied by a relative decline in unit costs, while slowly increasing productivity generally is accompanied by rapidly increasing costs. In industries where competition is vigorous and where the supply is close to consumption, prices of the product and unit costs of production usually are closely related. Industries in which unit costs are rising less than average unit costs for all industries can be expected to show price increases smaller than average prices for the whole economy. In those industries where unit costs are rising faster than average, we can expect prices to rise faster than the average price level.

This article analyzes trends in net output, output per person, and output per

man-hour in distributing foods of farm origin. Lack of adequate data on capital is the major reason for limiting the analysis to labor productivity rather than analyzing total productivity. Trends in labor productivity are affected by changes in economies of scale, changes in the quality of inputs, and quantity of other inputs associated with labor. The results presented here should be evaluated with these limitations in mind.

Most of the analysis presented here concerns data from 1948 to 1963. Adequate data are not yet available to make comparable estimates for 1964 to 1966. However, selected data for this recent period were analyzed to show preliminary trends. The data update those presented in an earlier publication. ^{1/} It was one of the first to contain estimates of net output per man-hour in food distribution. A more recent study which analyzed gross output in food retailing was published by Schwartzman. ^{2/} Fuchs also studied gross output of retail food stores as a part of a larger study of the service industries. ^{3/}

^{1/} William H. Waldorf and Hazen F. Gale, Output Per Man-Hour in Distributing Foods of Farm Origin, Tech. Bul. No. 1335, Economic Research Service, USDA, 1965. This bulletin also presents a more detailed description of the data and methods used in this analysis.

^{2/} Schwartzman, David, "Productivity in Food Retailing," Productivity in Marketing, J. L. Heskett, Editor, Department of Business Organization, Ohio State University, 1965.

^{3/} Fuchs, Victor R., The Growing Importance of the Service Industries, Occasional Paper 96, 1965, National Bureau of Economic Research.

Food distribution is defined here to include food wholesalers, food retailers, and eating places. The data apply only to foods that are produced from products originating on U.S. farms. Gross output is the final sales value (in constant dollars) of food sold to consumers by retailers and eating places. Net output is an estimate of the services provided by the food distribution system and includes value added by distribution and expenditures for supplies, packaging materials, containers, and business services (all in constant dollars).

Output in Food Distribution

Net output in food distribution increased 44 percent from 1948 to 1963, a compound rate of 2.4 percent per year (tables 5 and 9). However, preliminary data indicate that net output has increased at a rate of about 4.2 percent per year since 1963.

Net output in the wholesaling and retailing sector increased less than the increase for all food distribution from 1948 to 1963 (table 5). Net output of eating places increased more than that in the wholesaling and retailing sector. From 1963 to 1966, preliminary data indicated that net output in wholesaling and retailing increased at a rate of 3.4 percent per year, compared with 2.0 percent per year during 1948 to 1963. During 1963-66, output in eating places also has increased substantially faster than in earlier years.

Net output in all food distribution increased at a slower rate than the increase in the quantity of food entering the system from 1948 to 1963. Taken together, these changes imply a decline in distribution services per unit of food handled. However, most of this decline occurred during 1948-54.

Labor Used in Food Distribution

The number of persons engaged in the distribution of farm food products increased 10 percent from 1948 to 1963 (table 5). All of the increase occurred in eating places; the number of persons employed in retailing and wholesaling of farm foods declined 5 percent from 1948

to 1963. However, preliminary data indicate that the number of persons employed in retailing and wholesaling increased at an annual rate of 3.6 percent between 1963 and 1966, compared with an annual decrease of 0.3 percent from 1948 to 1963. The number of persons employed in eating places during 1963-66 increased at an annual rate of 4.8 percent, compared with 2.0 percent from 1948 to 1963.

The total number of man-hours worked in food distribution declined about 4 percent from 1948 to 1963 (table 5). Man-hours worked in the food retailing and food wholesaling component declined 16 percent. The decline in total man-hours was the net result of a decrease in the number of proprietors (who work more hours per week than paid employees), a small decrease in hours worked per week by paid employees, and a partially offsetting increase in the number of paid employees.

Output Per Man-Hour

Output per man-hour in food distribution increased 48 percent between 1948 and 1963, an annual increase of 2.7 percent per year (tables 5 and 9). Preliminary data for 1964 and 1966 show further increases in labor productivity, but at a slower rate than for 1948 to 1963. The annual rate of growth in output per man-hour between census years ranged from 2.0 percent from 1948 to 1954 to 3.2 percent from 1958 to 1963.

Output per man-hour in the food retailing and wholesaling component rose 62 percent from 1948 to 1963, or about 3.3 percent per year. The annual rate of growth in output per man-hour between census years ranged from 2.1 percent from 1948 to 1954 to 4.3 percent from 1958 to 1963. Part of this increase can be attributed to a rapid decline in small establishments and the relatively small output per person prevalent in these establishments.

Costs Per Unit of Net Output

Hourly labor costs increased 82 percent between 1948 and 1963, while output per man-hour rose 48 percent; the result was a 23 percent increase in unit labor costs (tables 5 and 6). Practically all

Table 5.--Output, persons, man-hours, output per person and output per man-hour in distribution of farm-originated foods, United States, selected years, 1929-1963

(1929=100)					
Items	1939	1948	1954	1958	1963
Food entering the distribution sector <u>1/</u>	118	147	179	200	235
Food distribution <u>2/</u>					
Net output	125	181	199	222	260
Persons <u>3/</u>	108	135	138	143	148
Man-hours <u>4/</u>	96	111	109	108	107
Output per person	116	134	145	155	176
Output per man-hour	130	163	183	207	242
Food wholesaling and retailing component					
Net output	124	171	181	202	231
Persons	103	119	116	118	113
Man-hours	92	99	92	89	83
Output per person	120	144	156	171	205
Output per man-hour	134	173	196	227	280

1/ Value (in 1947-49 dollars) of finished processed and unprocessed foods of farm origin entering the food distribution sector and destined for domestic civilian consumption.

2/ Includes wholesalers, retailers, and away-from-home eating places in handling farm-originated foods. Excludes for-hire transportation and assembling of farm products.

3/ Includes all persons (paid employees, unpaid family workers and proprietors of unincorporated businesses) engaged in handling farm-originated foods in wholesaling, retailing, and away-from-home eating establishments. Excludes persons in food distribution agencies who are engaged in handling nonfood items and foods which are not destined for U.S. civilian consumption. Excludes for-hire transportation and assembling of farm products.

4/ Based on total number of persons and estimates of average number of hours paid for including paid vacation and sick leave. Estimates of average number of hours are based on published BLS data on average number of hours per week for production workers in retail food stores and in total wholesale trade; the same averages were assumed to apply to unpaid family workers and for proprietors of unincorporated businesses a constant 60 hour week was assumed.

of the increase in unit labor costs occurred between 1948 and 1954 (table 6). After a period of stable unit labor costs between 1954 and 1963, preliminary data indicate that unit labor costs have been rising slightly since 1963.

Nonlabor costs in food distribution (total distribution costs less labor costs) per unit of net output increased about 97 percent between 1948 and 1963.

The faster increase in nonlabor costs reflects the substitution of capital for labor and increases in expenditures for advertising, maintenance, rent, interest, and other operating expenses. In 1963, nonlabor charges accounted for 51 percent of total distribution costs, compared with 39 percent in 1948.

Unit distribution costs (the sum of labor and nonlabor costs) increased 52

Table 6.--Hourly labor costs, unit labor costs, unit non-labor costs, and unit distribution costs in distribution of farm-originated foods, United States, selected years, 1929-1963

(1929=100)					
Items	1939	1948	1954	1958	1963
Food distribution ^{1/}					
Hourly labor costs ^{2/}	107	250	344	380	456
Unit labor costs ^{3/}	83	154	188	184	189
Unit non-labor costs ^{4/}	69	88	117	145	173
Unit distribution costs ^{5/}	75	119	151	163	181
Food wholesaling and retailing component					
Hourly labor costs ^{2/}	107	234	341	386	476
Unit labor costs ^{3/}	80	135	174	170	170
Unit non-labor costs ^{4/}	71	80	110	144	189
Unit distribution costs ^{5/}	76	109	144	158	179

^{1/} For food wholesaling, retailing, and away-from-home eating places. Excludes for-hire transportation and assembling of farm products.

^{2/} Obtained by dividing index of labor cost by index of total man-hours. Man-hours are based on total number of persons and estimates of average number of hours paid for, including paid vacation and sick leave.

^{3/} Obtained by dividing index of labor cost by index of net output.

^{4/} Obtained by dividing index of non-labor costs (total distribution costs minus farm costs) by index of net output.

^{5/} Obtained by dividing index of total distribution costs by index of net output.

percent from 1948 to 1963. During 1958-63, the increase was 11 percent (table 6).

The implicit price deflator--an index of prices for all goods and services--for the total private economy increased 30 percent between 1948 and 1963. The larger increase in unit distribution costs than in prices in the total private economy reflects the slower than average increase in output per man-hour in food distribution. The increase in the cost of distribution services contributed to a 39 percent increase in the spread between the farm value and retail cost of the market basket of farm foods. However, since farm prices declined from 1948 to 1963, retail prices of food products did not increase as much as many other items.

Factors Affecting Increases in Output Per Man-Hour

Important factors in increasing output per man-hour in distributing foods of

farm origin were changes in the organization of establishments and increases in capital equipment.

The change in the organization of retail stores between 1948 and 1963 is most apparent. Nearly all food stores are now self-service operations, whereas in 1948 only about 63 percent of the sales were in self-service stores.

In effect, there has been a substitution of customer labor for paid labor. Part of this substitution has been accompanied by a corresponding decrease in net output of services per unit of food handled since many services formerly provided by employees are now performed by customers. However, part of this decrease was offset by new services such as parking lots, larger stores, and wider selection of products.

Sales per worker (constant dollars) in retail food stores increased 47 percent from 1948 to 1963 (table 7). This increase was due to: (1) an increase in sales per worker for each size of store, and (2) an increase in importance of large stores where sales per worker were greatest. From 1948 to 1963, increases in sales per worker ranged between 7 percent for stores with annual sales of \$300,000 to \$499,000 and 36 percent for stores with annual sales of \$1,000,000 or more. Since the increase for all stores was greater than for any subgroups, it is apparent that the shift in relative importance was a more important factor in raising overall productivity than were increases in sales per worker for each size category. The increases within each size accounted for 44 percent of the increase in sales per worker in all stores, while the change in relative importance among groups accounted for 56 percent.

These data indicate that economies of scale exist in retail food stores and that the industry has been moving toward larger stores to take advantage of these economies. However, stores with 50 or more employees consistently had lower sales per worker than those with 20-49 employees (table 8). This indicates that there is a limit to economies of scale in retail food establishments. However, the optimal size probably is moving upward and establishments with 50-60 employees now may be more efficient than those with 20-49 employees. Internal organization and efficiency are not the only factors determining optimal size. External factors such as population density, proximity to major highways, and consumer acceptance of larger geographical shopping areas are also important.

Food wholesaling has also undergone organizational changes. Specialty and affiliated wholesalers have increased in number, while the number of independent general line wholesalers has decreased. These specialized wholesalers often are more efficient because they handle larger orders, have specialized equipment, and

are more knowledgeable in their specialty.

Although data are lacking, the amount of capital employed in wholesale and retail food establishments probably increased in the 1948-63 period. Palletized storage, conveyors, and mechanical trucks have reduced labor requirements in warehouses. Delivery to central warehouses of chainstores and redistribution by one stop delivery has reduced the number of delivery men and trucks needed to service retail stores. In retail stores, conveyors and other innovations in merchandise handling have reduced labor requirements.

A factor that tends to retard output per man-hour is worker injuries. The number of days lost in retail food stores resulting from disabling work injuries for each million employee hours worked averaged 11 percent higher during 1962 to 1965 than during 1958 to 1961. ^{4/} During these same periods, the work injury rate in eating and drinking places increased 13 percent. These increases were partially offset by a decrease of 19 percent in the work injury rate for wholesaling establishments. Time lost because of disabling work injuries usually were less than 1 percent of the total hours worked.

Comparisons With Other Sectors

Trends in output per man-hour vary widely among sectors of the economy. The annual increase in labor productivity was higher for the total private economy (3.3 percent) than for food distribution (2.7 percent) during the 1948-63 period (table 9). However, the increase in the nonfarm sector (2.8 percent) was about the same as for food distribution. Output per man-hour in the farm sector increased 5.7 percent per year.

Labor productivity in food retailing and food wholesaling increased faster than labor productivity in all retail trade from 1948 to 1963. Output per person in food retailing and wholesaling increased at an annual average rate of 2.4 percent.

^{4/} Bureau of Labor Statistics, Handbook of Labor Statistics, Bulletin 1555, U.S. Department of Labor, 1967.

Table 7.--Sales per worker, distribution of establishments, and distribution of employees in all grocery and combination stores by sales class, United States, 1948, 1954, 1958, and 1963 ^{1/}

Annual sales per establishment	Sales per worker (constant 1947-49 dollars) ^{2/}			
	1948	1954	1958	1963
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
\$2,000,000 or more	3/30,787	35,240	38,981	42,511
\$1,000,000 to 1,999,000		36,469	38,294	41,122
\$500,000 to 999,000	33,719	34,595	35,313	36,998
\$300,000 to 499,999	31,438	31,889	31,710	33,562
\$100,000 to 299,999	26,483	27,373	27,063	29,511
Under \$100,000	16,975	19,633	18,157	19,404
All stores	23,229	28,397	30,382	34,199
Distribution of establishments				
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
\$2,000,000 or more	3/1	---	1	2
\$1,000,000 to 1,999,000		2	3	4
\$500,000 to 999,000	2	3	4	5
\$300,000 to 499,999	2	3	4	4
\$100,000 to 299,999	11	15	16	18
Under \$100,000	84	77	72	67
Total	100	100	100	100
Distribution of workers ^{2/}				
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
\$2,000,000 or more	3/9	10	16	19
\$1,000,000 to 1,999,000		16	20	24
\$500,000 to 999,000	11	13	13	15
\$300,000 to 499,999	8	8	7	7
\$100,000 to 299,999	22	21	18	15
Under \$100,000	50	32	26	20
Total	100	100	100	100

^{1/} The grocery store data for 1958 and 1963 include delicatessens, the data for 1948 and 1954 do not.

^{2/} Includes total paid employees and active proprietors.

^{3/} For 1948, the Census of Business listed this category as \$1,000,000 or more.

Compiled from Census of Business data.

Table 8.--Sales per worker, distribution of establishments, and distribution of employees in all grocery and combination stores by employee size, 1948, 1954, 1958, and 1963 ^{1/}

Paid employees per establishment	Sales per worker (constant 1947-49 dollars) ^{2/}			
	1948	1954	1958	1963
	Dollars	Dollars	Dollars	Dollars
50 or more	22,099	30,548	32,212	36,600
20-49	28,578	34,986	37,540	40,604
10-19	29,908	33,046	34,621	37,477
8-9	28,102	29,596	30,521	32,794
6-7	24,453	26,379	28,330	30,713
4-5	21,568	24,013	25,794	28,965
Less than 4	18,560	23,336	22,421	24,235
All stores ^{3/}	22,306	28,397	30,382	34,199
Distribution of establishments				
	Percent	Percent	Percent	Percent
50 or more	--	1	1	1
20-49	1	3	4	6
10-19	2	4	5	6
8-9	1	2	2	2
6-7	3	3	3	3
4-5	6	6	6	6
Less than 4	87	81	79	76
Total ^{3/}	100	100	100	100
Distribution of workers ^{2/}				
	Percent	Percent	Percent	Percent
50 or more	4	11	14	13
20-49	12	21	27	34
10-19	11	14	14	15
8-9	4	4	4	3
6-7	7	6	5	4
4-5	11	9	7	6
Less than 4	51	35	29	25
Total ^{3/}	100	100	100	100

^{1/} The grocery store data for 1958 and 1963 include delicatessens, the data for 1948 and 1954 do not.

^{2/} Includes total paid employees and active proprietors.

^{3/} Data are for stores that were operated entire year except for 1948. The 1948 data are for stores that were operating November 15 of that year.

Compiled from Census of Business data.

Table 9.--Average annual percentage increase in net output, employment, man-hours, output per person, output per man-hour in food distribution and other sectors of the economy, United States, selected periods, 1929-63

Items	1948 to 1963 <u>1/</u>	1939 to 1948 <u>1/</u>	1929 to 1939 <u>1/</u>	1929 to 1963 <u>2/</u>
	Percent	Percent	Percent	Percent
Food distribution <u>3/</u>				
Net output	2.4	4.2	2.2	2.9
Persons .....	.6	2.5	.8	1.2
Man-hours	-.3	1.6	-.4	.3
Output per person	1.8	1.6	1.4	1.6
Output per man-hour	2.7	2.5	2.7	2.6
Food wholesaling and retailing component				
Net output	2.0	3.6	2.2	2.5
Persons	-.3	1.6	.3	.5
Man-hours	-1.2	.7	-.8	-.4
Output per person	2.4	2.0	1.8	2.0
Output per man-hour	3.3	2.9	3.0	3.0
Output per man-hour				
Farm sector <u>4/</u>	5.7	2.8	1.8	3.8
Private non-farm sector <u>4/</u>	2.8	2.0	1.6	2.2
Total private economy <u>4/</u>	3.3	2.8	1.5	2.7

1/ Based on a geometric rate between the two years only.

2/ Based on a semilogarithmic trend equation, using least squares and data for 1929, 1939, 1948, 1954, 1958, and 1963.

3/ For food wholesaling, retailing, and away-from-home eating places.

4/ Based on BLS estimates of net output per man-hour, computed on an establishment basis and based on approximate hours paid (including paid vacations, sick leave, and so on) rather than hours worked.

Fuchs estimated that gross output per person in 10 selected retail trades increased at an annual rate of 1.7 percent. 5/

Productivity increases in wholesale and retail food trades and in agriculture have resulted from similar causes. Small units have been replaced by larger and more efficient units, with a resulting improvement in output per man-hour. However, the substitution of capital for

labor and the adoption of new technologies probably have been greater in agriculture than in food distribution.

Outlook

Future increases in productivity in food distribution will depend mostly on the introduction of labor saving equipment, especially in wholesaling and retailing. New methods of packaging meat

5/ Fuchs, Victor R. and Jean Alexander Wilburn, Productivity Differences Within the Service Sector, Occasional Paper 102, National Bureau of Economic Research, 1967.

and produce, and new checkout systems may lead to improved output per man-hour. A large part of the increase in productivity in the past have been the result of a shift to large self-service stores from small, clerk-service stores where under-employment was great. However, further increases in productivity due to elimination of small, relatively inefficient stores are likely to be small, because a major proportion of stores already are self-service.

The situation in eating places is less clear. Here the consumer will play a major role by indicating which type of establishment he prefers. A shift towards large, cafeteria style eating

places might improve productivity substantially; however, growth in the proportion of eating places offering table service may retard increases in output per man-hour for all eating places. Selling of prepared foods (hot canned foods, sandwiches, pastry, complete hot meals) through vending machines is likely to increase in the future. This trend will be due in part to new vending technologies such as microwave ovens which heat frozen foods in seconds. It should be pointed out, however, that although automated merchandising eliminates the need for sales personnel, it does create a need for more workers to stock, repair, and service these vending machines.

THE CHANGING INPUT STRUCTURE OF SELECTED FOOD PROCESSING INDUSTRIES: AGRICULTURE'S DECLINING SHARE

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Agriculture's declining share of total inputs purchased by food processors since World War II is primarily the result of rapid and substantial increases in purchases of nonagricultural inputs by processors. Constant dollar expenditures for total inputs have increased rapidly since 1947. Expenditures for production workers' wages increased at the same relatively slow rate as agricultural inputs.

These sizable relative increases for nonagricultural inputs were primarily associated with items like: packaging, advertising, depreciation, transportation, and state and local taxes. The share of expenditures made by food processors for agricultural inputs would have declined even if prices for both agricultural and nonagricultural inputs had been stable since 1947. Actually, stable or declining prices for agricultural inputs, together with the simultaneous rising prices for the nonagricultural inputs combined to yield an even greater impact on "agriculture's share" than would have occurred from quantity shifts alone. All the evidence implies the basic trends reported will continue.

Consumer expenditures for domestically produced farm foods rose from \$41.9 billion in 1947 to \$85.5 in 1967. The farmer's share ¹/_{of} consumer expenditures has declined almost every year since 1947 (table 10).

The farm food marketing bill, in contrast, has increased almost every year since 1947. However, the proportion of consumer expenditures going to various marketing agencies varied during the period. Food processors increased their share of the marketing bill from 36 to 39 percent, while the share going to assemblers, transportation agencies, and wholesalers dropped from 21 percent to 17 percent (table 11).

Expenditures for inputs purchased by food processors were analyzed to: (1) show what inputs (goods and services) have

been responsible for their increasing share of the marketing bill; (2) compare changes in their expenditures for nonagricultural inputs with those for agricultural inputs; and (3) identify agriculture's changing share of total input expenditures made by food processors.

The analysis was based upon expenditure data aggregated from corporation income tax return schedules for food manufacturing firms. The data either come directly from Source Book of the Statistics of Income, Internal Revenue Service (which provides income tax data in finer industry detail than the Statistics of Income: Corporation Tax Returns) or were generated from the Source Book by the application of appropriate ratios. These ratios were developed from data obtained from a sample of corporate tax returns selected by the Department of Agriculture,

¹/_{This periodical regularly publishes 2 concepts of farmer's share: (1) the farmer's share estimate associated with the Market Basket, and (2) the farmer's share of total consumer food expenditures. The former concept includes only food prepared and consumed at home, while the latter includes all domestic farm foods, i.e., consumed both at and away-from-home. Since food processors supply both markets, the latter concept has been adopted for table 10.}

Table 10.--Total marketing bill, farm value, and civilian expenditures for domestic farm food products bought by civilians, United States, 1947-67 1/

Year	Marketing bill <u>2/</u>	Farm value <u>3/</u>	Civilian expenditures <u>4/</u>	Farm share
	Mil. dol.	Mil. dol.	Mil. dol.	Percent
1947	22,643	19,294	41,937	46
1948	24,934	19,872	44,806	44
1949	25,955	17,416	43,371	40
1950	25,938	18,053	43,991	41
1951	28,703	20,550	49,253	42
1952	30,511	20,422	50,933	40
1953	31,522	19,490	51,012	38
1954	32,318	18,824	51,152	37
1955	34,378	18,749	53,127	35
1956	36,302	19,246	55,548	35
1957	37,888	20,405	58,293	35
1958	39,549	21,445	60,994	35
1959	42,202	20,916	63,118	33
1960	44,150	21,699	65,849	33
1961	45,101	22,043	67,144	33
1962	46,891	22,424	69,315	32
1963	48,945	22,574	71,519	32
1964	51,188	23,352	74,540	31
1965	52,109	25,506	77,615	33
1966	55,300	28,100	83,400	33
1967 <u>5/</u>	58,000	27,500	85,500	32

1/ Data for 1960 and later years include Alaska and Hawaii.

2/ The difference between civilian expenditures and farm value.

3/ Payments to farmers (less imputed value of byproducts) for the quantities of raw farm products equivalent to the products purchased by consumers.

4/ Market value of food products derived from products produced on domestic farms and purchased by civilian consumers. Imports and seafoods are not included.

5/ Preliminary.

Agricultural Economic Report No. 105, p. 2, and Marketing and Transportation Situation, Nov. 1967, p. 11.

from a group to which it had official access for research purposes.

Expenditures defined as inputs in this article include: adjusted cost of goods sold; advertising expenditures; depreciation; production workers' wages; nonproduction workers' wages; compensation of officers; fringe benefits; and taxes (exclusive of Federal and state corporate income taxes). The concept of inputs adopted for this article excluded "profits" and all inputs used by every

other marketing agency at succeeding stages in moving food products from farm to consumer.

Undeclared expenditures for these inputs in 5 food manufacturing industries for the 1947-63 period and estimates for the 1964-66 period are presented in table 14.

To measure changes in the quantity or inputs used by food processors, each

Table 11.--Marketing bill for farm foods, by marketing agency, and agency shares of the total bill, selected years, 1947-63

Year	Total	Processors	Assemblers, transportation agencies, and wholesalers	Retailers (including eating places)			
	<u>Mil. dol.</u>	<u>Mil. dol.</u>	<u>Pct.</u>	<u>Mil. dol.</u>	<u>Pct.</u>	<u>Mil. dol.</u>	<u>Pct.</u>
1947	22,643	8,218	36	4,655	21	9,770	43
1954	32,316	12,297	38	6,298	19	13,721	43
1958	39,549	15,832	40	7,122	18	16,595	42
1963 <u>1</u> /	48,945	19,031	39	8,209	17	21,705	44

1/ Preliminary.

Agricultural Economic Report No. 105, p. 16.

expenditure series was deflated by a price index that appropriately represents the price component of each expenditure series. All price indices were either constructed or converted to a 1957-59=100 base.

Inputs

Adjusted Cost of Goods Sold 2/: Adjusted cost of goods sold included the value of agricultural inputs and specified nonagricultural inputs purchased by the firm. Specifically, it included the following inputs: merchandise bought for manufacture or resale, fuel, power, utilities, transportation, containers, etc., and other costs per schedule, for instance, insurance premiums. 3/

For each processing industry (i.e., meat products, dairy, canning/preserving,

grain mill products, baking), expenditures for inputs included in the adjusted cost of goods sold were deflated by a weighted wholesale price index of agricultural and nonagricultural inputs developed for each of the industries by the Marketing Economics Division.

Advertising: Advertising consists of all identified advertising expenditures listed by corporations on their Federal Income Tax Returns. Advertising expenditures (1947-1960) were deflated by an index of the unit cost of advertising published by Printer's Ink. This series was updated for the period 1960-63. 4/

Depreciation: Depreciation expenses reported by corporations include previous years' purchase of buildings, furniture, fixtures, machinery and equipment and other capital goods allocated to the

2/ This is called "adjusted cost of goods sold" because salaries and wages, which are included in the IRS concept, "cost of goods sold," were estimated and then subtracted. These show up as production workers' wages, a separate "input." Data were available to disaggregate the portion of the "cost of goods sold" representing the purchase value of agricultural inputs used by these food processors only for 1947 and 1958.

3/ Source Book data include adjustments for changes in inventory where applicable.

4/ Bachman, Jules, Advertising and Competition, New York University Press, N.Y., 1967, p. 202.

current year. The Department of Commerce's implicit price deflator for industrial construction was adopted for deflating depreciation.

Production and Nonproduction Workers' Wages: Production workers' wages are the wages paid manufacturing line workers, (i.e., total wage payments in constant dollars). Nonproduction workers include all other workers except for explicitly identified executive officers. Thus, all clerks, stenographers, route salesmen, and management personnel not listed by the corporation as executives are classified as nonproduction workers.

Changes in wage rates for production workers and nonproduction workers in these industries appeared closely associated. Thus, average gross hourly earnings by production workers (employed by firms manufacturing nondurable goods) was used to construct an unweighted index for deflating production and nonproduction workers' wages.

Compensation of Officers: Compensation of officers refers primarily to wages. However, items such as stock bonuses or bonds were included, if such an item was identified as having been paid to an officer for personal services rendered. Data on the compensation of the top 3 executive officers of leading companies, by industry category, were available from the American Management Association's Executive Income, Top Management. Unweighted indexes of executive compensation were then computed for each industry, and used to deflate the Source Book compensation of officers series. Compensation of the top 3 executives was considered an appropriate series for deflating compensation of officers data. For instance, studies by the National Industrial Conference Board show that the relationship between top executives salaries remains fairly stable, (e.g. the No. 2 man's salary in manufacturing approximates 75% of the top executive's, and the third highest, 60%, etc.). 5/

Fringe Benefits: Fringe benefits reported to IRS include payments made by

the corporation to pension, profit-sharing, stock bonus, annuity and major medical plans, and other employee benefits, (such as welfare and Social Security payments). The index for deflating fringe benefits for all industries was computed as follows: The average weekly man-hours per production worker was multiplied by 52 weeks to obtain annual man-hours per year. In turn, this was multiplied by the number of all wage and salary workers (nondurable goods) to obtain total man-hours for all nondurable manufacturing for each year. Fringe benefits as reported by BLS were divided by total man-hours to obtain the average hourly cost of fringe benefits for all nondurable goods manufacturing employees. This rate of fringe benefits per man-hour was used to construct the unweighted index used to deflate all IRS fringe benefits data.

Taxes: The tax series consists of tax payments made to state and local jurisdictions and exclude all Federal and state corporation income taxes. While they are primarily property and sales taxes, business and license taxes also are included. The Department of Commerce's unweighted implicit price deflators for educational and highway construction were weighted by expenditures made by state and local governments for non-residential construction (schools, hospitals, university facilities, and county court houses, etc.) and total state and local highway construction, excluding Federal grants, to compute a weighted index to deflate state and local taxes.

Changes in Quantities of Inputs Purchased

The deflated input expenditures made by food processors provide a means for determining the changes in real inputs utilized (table 12). Only 2 comparisons with 1947 are reported (1958 and 1963) for non-agricultural inputs because trends were relatively uniform throughout the 1947-1963 period. One comparison is made for agricultural inputs, because data were available only for 1947 and 1958 to dis-aggregate adjusted cost of goods sold.

5/ National Industrial Conference Board, Top Executive Compensation (High Lights) Studies in Personnel Policy No. 204, New York, 1966.

Table 12.--Deflated input expenditures by 5 food processing industries, 1958 and 1963

Item and year	(1947=100)				
	Industry				
	Meat products	Dairy products	Canning and: preserving : products	Grain mill products	Bakery products
Adjusted cost of goods sold:					
1958	133	292	350	158	256
Agricultural	118	221	217	80	161
Nonagricultural	211	509	431	333	258
1963	160	331	420	214	369
Advertising:					
1958	159	248	265	204	243
1963	189	260	262	315	220
Depreciation					
1958	199	271	194	289	213
1963	256	288	234	447	264
Production workers' wages:					
1958	131	114	123	104	111
1963	116	93	52	108	52
Nonproduction workers' wages:					
1958	136	365	227	135	119
1963	163	564	250	63	153
Compensation of officers:					
1958	100	175	83	86	93
1963	113	163	76	89	92
Fringe benefits:					
1958	113	219	96	133	214
1963	78	158	57	94	532
Taxes:					
1958	160	270	194	164	184
1963	225	375	245	269	292

Agricultural Inputs: The quantity of real agricultural inputs purchased during this period increased for all food processors studied, except the grain mill products industry. While the increase in processor purchases of agricultural inputs was appreciable, the gain in expenditures for some nonagricultural inputs was dramatic.

Comparative growth was measured by dividing the percentage change in growth in expenditures for nonagricultural inputs by the percentage change in growth in expenditures for agricultural inputs. In the meat products industry, for instance, between 1947 and 1958, the non-agricultural inputs included in the adjusted cost of goods sold increased about 6 times faster than agricultural inputs ($111 \div 18$, table 12). Corresponding comparisons for other inputs show gains of about 3 times more for advertising; 5 times for depreciation; 1.7 times for production workers' wages; 1.9 times for nonproduction workers' wages; and 3 times for state and local taxes. In contrast fringe benefits and compensation of officers either declined or grew at a slower rate.

Of the 13 instances where the purchases of nonagricultural inputs grew less than those of agricultural inputs, 5 were associated with the canning/preserving industry. These were: depreciation, production workers' wages, compensation of officers, fringe benefits, and state and local taxes. The slower growth of expenditures for production workers' wages and fringe benefits appears to have been associated with less union activity in this industry, than in the others studied during the period. The slower growth in depreciation seems to have been related to the fact that most of the retooling of the canning industry occurred after 1958. Establishments which primarily freeze food products were excluded from this industry. The rural location of most canning plants explains the slower rise in state and local taxes.

Nonagricultural Inputs: With few exceptions, the quantities of nonagricultural inputs used by processors increased substantially between 1947 and 1963 (table 12). The primary exception to the growth pattern for nonagricultural inputs was production workers' wages, which declined in 3 industries. While wage rates increased, the total number of production workers declined. This decrease in number was associated with the substitution of capital for labor within larger corporate establishments and the decrease in the total number of establishments within these industries. For instance, the baking industry, according to the 1963 Census of Manufactures, lost 2,142 establishments through business closures and 23,799 production workers during this period. The dairy and canning/preserving industries incurred corresponding losses.

Depreciation more than doubled between 1947 and 1963 reflecting changes in tax rules, an increase in gross depreciable assets per dollar of total receipts, and shorter service lives of assets. For instance, Hiemstra reported: 6/

"...the continuity and magnitude of the increase in depreciation per dollar of total receipts was associated with three sets of forces: About 1/4 was caused by an increase in gross depreciable assets per dollar of total receipts; 1/3 by use of rapid methods of depreciation and 2/5 by shorter service lives of assets."

Like depreciation, advertising more than doubled between 1947-1963. Unlike depreciation it leveled noticeably from 1958 to 1963. Advertising expenditures reflected both more varieties and an increase in the intensity of nonprice competitive sales practices of most corporations. The quantity of advertising increased with the addition of television, and the expanded use of all other established media.

6/ Hiemstra, Stephen, "Depreciation: A Rising Cost of Processing Food Products," Journal of Farm Economics, XLIV (5), 1577-78, December 1962.

Expenditures for fringe benefits did not increase as greatly as most of the other nonagricultural inputs primarily because of the decline of the numbers of production workers in these industries.

State and local taxes almost tripled between 1947-1963. They reflected increasing numbers of governmental services and a rapidly expanding population as well as higher costs. Most of these services are identified with schools, hospitals, and highways.

Between 1947 and 1958 expenditures for the nonagricultural input component of the adjusted cost of goods sold more than tripled. Purchases of these non-agricultural inputs were about 6 times greater than those of agricultural inputs in the meat products industry, and by approximately 3 times in the dairy, canning/preserving, and baking industries. The nonagricultural input component of the adjusted cost of goods sold primarily consisted of transportation, utilities, packaging, and other nonagricultural ingredients. Shifts to new products and different kinds of packaging (e.g., frozen foods, paper milk cartons, bread wrappers, etc.) were particularly great during the post War II period.

While table 12 reports data for only 3 years, the trends reflect the relationships found in a year by year comparison for 1947-1963. All the evidence indicates that the trends will continue beyond 1963.

Changes in Shares of Expenditures for Inputs

Table 13 reports each input's share of total expenditures for inputs for 1947, 1958, and 1963. It was impossible to identify any particular shift in share between any 2 time periods as being attributable to any single input. However, total transfers must balance and relative gains and losses are readily identified. For any comparison of changes between 1947 and any other year, changes in the adjusted cost of goods sold must equal the algebraic sum of the changes in share among all other nonagricultural inputs.

The disaggregation of expenditures for agricultural inputs from adjusted cost

of goods sold made it possible to ascertain how much of any change in the share of the adjusted cost of goods sold was the result of changes in expenditures for agricultural inputs. Even when no change occurred in the adjusted cost of goods sold, it was possible to determine whether there was a shift in expenditures for agricultural and nonagricultural inputs.

Between 1947 and 1958, the proportion of total processor purchases for agricultural inputs declined in every industry. The magnitude of decline ranged from 0.2 of a percentage point in the baking industry to 26.8 percentage points in the grain mill products industry.

With the exception of the meat products industry, there was a consistent increase in the proportion of total input expenditures attributable to adjusted cost of goods sold. In meat products, while there was no change in the adjusted cost of goods sold there was an 8.1 percentage point shift in share from the agricultural to nonagricultural inputs.

All of the increases in share associated with the adjusted cost of goods sold were attributable to nonagricultural inputs such as packaging, utilities, etc. Other nonagricultural inputs that increased consistently included advertising, depreciation, and state and local taxes. However, only state-local taxes increased for all industries, for all comparisons. Thus, by 1963, both advertising and depreciation shares for meat products, dairy, canning/preserving, and baking had either leveled off or declined.

These data suggest a continuing, but slowing decline in the share of total expenditures for inputs attributable to agricultural inputs and production workers' wages. For instance, the lower rates of decline in expenditures for agricultural inputs by the canning/preserving and baking industries and by the meat products industry for production workers' wages support this concept of a decelerating rate of decline. For agricultural inputs, the availability of synthetic substitutes and the further addition of services (such as packaging, grading, product development, quality control, and improved means of preservation, etc.) appear to be

Table 13.--Distribution of inputs for 5 food processing industries, based on 1957-59 constant dollars, 1947, 1958, and 1963 ^{1/}

Industry and input	1947	1958	1963
	Percent	Percent	Percent
Meat products industry:			
Adjusted cost of goods sold	86.3	86.3	88.4
Agricultural ^{2/}	72.6	64.5	---
Nonagricultural ^{2/}	13.7	21.8	---
Advertising .....	.4	.4	.5
Depreciation .....	.5	.7	.7
Production workers' wages	8.3	8.2	6.2
Nonproduction workers' wages	2.6	2.6	2.7
Compensation of officers .....	.5	.4	.4
Fringe benefits	1.0	.9	.5
State-local taxes .....	.4	.5	.6
Total	100.0	100.0	100.0
Dairy products industry:			
Adjusted cost of goods sold	68.5	78.4	79.3
Agricultural ^{2/}	51.7	44.8	---
Nonagricultural ^{2/}	16.8	33.6	---
Advertising	1.5	1.4	1.3
Depreciation	1.9	2.0	1.9
Production workers' wages	20.2	9.1	6.5
Nonproduction workers' wages	4.2	5.9	8.2
Compensation of officers	1.2	.8	.7
Fringe benefits	1.6	1.4	.9
State-local taxes .....	.9	1.0	1.2
Total	100.0	100.0	100.0
Canning and preserving products industry:			
Adjusted cost of goods sold	43.7	66.5	78.6
Agricultural ^{2/}	16.6	15.7	---
Nonagricultural ^{2/}	27.1	50.8	---
Advertising	2.6	3.0	2.9
Depreciation	2.4	2.0	2.4
Production workers' wages	39.7	21.2	8.8
Nonproduction workers' wages	3.4	3.4	3.6
Compensation of officers	2.9	1.0	1.0
Fringe benefits	3.5	1.4	.8
State-local taxes	1.8	1.5	1.9
Total	100.0	100.0	100.0
Grain mill products industry:			
Adjusted cost of goods sold	81.3	84.2	87.9
Agricultural ^{2/}	56.3	29.5	---
Nonagricultural ^{2/}	25.0	54.7	---
Advertising	1.5	2.0	2.5
Depreciation .....	.6	1.2	1.5
Production workers' wages	8.9	6.1	4.8
Nonproduction workers' wages	5.1	4.5	1.6
Compensation of officers	1.2	.7	.5
Fringe benefits .....	.8	.7	.4
State-local taxes .....	.6	.6	.8
Total	100.0	100.0	100.0
Baking products industry:			
Adjusted cost of goods sold	43.2	60.2	67.8
Agricultural ^{2/}	1.2	1.0	---
Nonagricultural ^{2/}	42.0	59.2	---
Advertising	2.1	2.8	2.0
Depreciation	2.1	2.4	2.3
Production workers' wages	24.3	14.8	5.4
Nonproduction workers' wages	22.0	14.3	14.4
Compensation of officers	2.5	1.3	1.0
Fringe benefits	2.2	2.6	5.1
State-local taxes	1.6	1.6	2.0
Total	100.0	100.0	100.0

^{1/} These years reflect the pattern of intervening years.^{2/} The summation of agricultural and nonagricultural components equals the percent reported by adjusted cost of goods sold. To avoid double counting, sum only the adjusted cost of goods sold, advertising, depreciation, etc.

major factors governing the extent and rate of decline in share. For production workers' wages the extent of automation and the increasing proportion of nonproduction workers in the labor force also

appear important. These data suggest that the processes which have caused this continuing decline of agriculture's and production workers' shares are likely to continue.

Table 14.--Undeclared expenditures for inputs by 5 food processing industries, 1947-66

Year	: Adjusted : : cost of : : goods sold :	: Advertising : : : : :	: Depreciation : : : : :	: Production : Nonproduc- : Compensa- : Reported : : workers' : tion work- : tion of : fringe : Taxes : wages : ers' wages : officers : benefits : :				
	Thou. dol.	Thou. dol.	Thou. dol.	Thou. dol.	Thou. dol.	Thou. dol.	Thou. dol.	Thou. dol.
Meat products industry								
1947	10,017,771	38,402	34,487	565,419	173,139	30,567	41,163	37,551
1948	10,825,066	46,535	41,692	600,687	210,392	32,841	41,527	41,428
1949	10,006,285	51,699	48,899	621,639	219,503	33,665	46,139	45,427
1950	10,455,201	51,539	53,308	672,516	233,913	37,417	58,114	52,968
1951	12,334,722	49,884	57,403	770,369	262,040	38,583	65,580	54,505
1952 1/	11,717,672	55,698	61,584	806,008	266,843	40,532	64,302	55,902
1953	11,142,875	61,512	65,766	799,393	283,976	42,481	74,800	57,298
1954	11,306,745	72,739	76,081	905,806	300,867	44,635	68,916	61,709
1955	10,918,287	75,312	83,462	978,406	308,448	52,689	110,807	68,495
1956	11,091,684	86,489	90,408	1,060,326	331,668	53,053	90,767	71,629
1957	11,888,652	88,519	95,297	1,203,689	367,770	54,015	78,020	74,753
1958	13,212,966	72,100	102,983	1,240,452	391,939	58,143	127,244	77,525
1959	13,205,477	80,306	111,273	1,229,033	350,491	66,282	142,919	92,188
1960	12,333,248	88,163	104,765	1,181,397	338,750	62,032	149,060	93,884
1961	14,424,496	89,131	119,104	1,344,228	487,601	77,672	155,048	106,973
1962	14,244,546	98,049	141,087	1,338,044	493,147	75,645	155,500	111,698
1963	13,403,450	95,415	141,343	1,277,023	548,937	78,373	132,387	117,788
1964 1/	14,058,317	104,271	149,651	1,364,102	508,089	84,179	161,143	127,303
1965 1/	14,220,902	109,150	158,096	1,396,763	524,657	88,318	166,245	135,101
1966 1/	14,383,022	114,030	166,541	1,429,888	541,458	92,458	171,444	142,899
Dairy products industry								
1947	2,669,775	42,424	42,967	418,512	86,182	22,249	20,132	25,002
1948	2,765,940	42,366	48,488	441,421	92,020	21,956	19,370	26,142
1949	2,457,151	47,167	54,800	446,861	101,800	23,722	18,312	30,801
1950	2,470,161	54,342	60,425	464,142	109,632	25,077	23,073	33,912
1951	2,861,694	65,279	65,356	515,961	116,056	26,966	33,954	36,232
1952 1/	2,899,541	68,070	66,814	518,199	116,926	27,587	34,073	35,346
1953	2,933,800	70,862	68,273	524,024	118,586	28,208	35,604	34,461
1954	2,838,654	80,305	74,851	539,465	129,728	27,344	38,129	38,432
1955	3,036,552	86,990	87,629	574,982	140,473	30,124	45,318	41,659
1956	3,032,249	91,532	82,295	589,596	138,092	25,321	45,685	39,320
1957	3,019,735	78,139	83,929	379,687	258,303	24,635	54,036	39,352
1958	5,930,650	124,254	174,921	799,711	524,659	74,100	120,450	87,033
1959	6,381,236	135,671	191,072	869,879	552,869	83,090	139,167	101,553
1960	6,755,790	140,726	188,008	899,954	603,651	78,787	145,299	111,678
1961	6,692,341	149,894	188,045	811,683	737,347	86,566	137,024	114,343
1962	6,921,057	152,947	209,802	767,374	831,878	84,186	143,209	122,584
1963	6,909,250	144,783	198,451	751,513	942,153	82,117	131,610	130,887
1964 1/	7,326,656	157,743	209,104	669,641	1,030,578	86,590	156,431	139,849
1965 1/	7,547,620	162,419	214,072	614,741	1,136,823	88,051	163,450	147,993
1966 1/	7,773,346	167,094	219,040	555,078	1,247,544	89,513	170,587	156,137
Canning and preserving products industry								
1947	1,273,493	41,098	29,532	445,336	38,242	29,046	23,538	26,013
1948	1,419,596	45,603	37,667	502,993	48,674	29,013	25,774	29,607
1949	1,466,083	53,271	40,320	541,942	52,502	28,405	24,401	31,611
1950	1,765,332	57,113	42,064	624,909	62,271	34,620	29,293	36,740
1951	1,810,633	64,728	47,110	621,484	68,744	33,438	25,471	40,177
1952 1/	1,834,807	72,611	50,600	692,241	84,142	33,996	31,661	41,768
1953	1,880,696	80,494	54,089	741,283	91,286	34,553	37,544	43,359
1954	1,977,249	91,325	56,993	686,251	99,736	35,141	38,512	44,740
1955	2,224,430	106,890	66,031	803,103	97,318	39,865	49,489	53,426
1956	2,295,777	110,873	65,592	906,836	110,485	36,370	49,650	56,084
1957	2,402,820	112,409	73,251	888,269	105,284	40,770	51,580	57,764
1958	2,856,153	128,891	85,938	912,390	145,132	45,663	61,618	65,219
1959	3,006,517	145,414	93,889	1,011,543	135,685	51,699	68,036	78,122

SELECTED NEW PUBLICATIONS

1. "Alfalfa Meal in Poultry Feeds...An Economic Evaluation Using Parametric Linear Programming," by Reed D. Taylor, George O. Kohler, Kenneth H. Maddy, and Robert V. Enochian, U.S. Dept. Agr., Econ. Res. Ser., AER-130, Jan. 1968.
2. "Consumer Response to Various Levels of Advertising for Fluid Milk," by Wendell E. Clement and Peter L. Henderson, U.S. Dept. Agr., Econ. Res. Ser., MRR-805, Oct. 1967.
3. "Effects of Reclaimed Gin-Loss Cotton on Lint Quality and Spinning Performance," by Shelby H. Holder, Jr., Oliver L. McCaskill, and Edward H. Shanklin, U.S. Dept. Agr., Econ. Res. Ser., MRR-808, Nov. 1967.
4. "Fluid Milk Distribution in Georgia Costs and Alternatives," by J. C. Purcell, J. D. Goodwin, and J. C. Elrod, Ga. Agr. Expt. Sta., Res. Bull. 17, Nov. 1967. Univ. of Georgia College of Agr., Athens, Ga.
5. "Heavy Grain Exports in Voyage-Chartered Ships: Rates and Volume," by T. Q. Hutchinson, U.S. Dept. Agr., Econ. Res. Ser., MRR-812, Jan. 1968.
6. "Structural Changes in the Federally Inspected Meat Processing Industry, 1961-64," by Willis E. Anthony, U.S. Dept. of Agr., Econ. Res. Ser., AER-129, Feb. 1968.
7. "Supply and Price Data on Cotton Gin Motes," by Shelby H. Holder, Jr., U.S. Dept. Agr., Econ. Res. Ser., MRR-809, Nov. 1967.
8. "The Western Cattle Feeding Industry: Structural and Marketing Changes 1952-62," by Gerald E. Marousek, Idaho Agr. Expt. Sta., Bull.-481, July 1967. (U.S. Dept. Agr., Econ. Res. Ser. cooperating.) Idaho Agr. Expt. Sta., Agr. Science Bldg., Moscow, Idaho 83843.
9. "Types of Food Service Offered and Number of Outlets in the Food Service Industry--A Preliminary Report," by Michael G. Van Dress and William H. Freund, U.S. Dept. Agr., Econ. Res. Ser., ERS-359, Oct. 1967.

: Unless otherwise indicated, items listed are Economic Research Service :
 : publications and single copies may be obtained free from the Division of :
 : Information, Office of Management Services, U.S. Department of Agriculture, :
 : Washington, D.C. 20250. :
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LIST OF SPECIAL ARTICLES

in

The Marketing and Transportation Situation
1967

Marketing Costs, Spreads, and Profits

Net Income of Leading Firms Marketing Farm Products, 1965 and 1966	May
The Bill for Marketing Farm-Food Products	Aug.
Costs and Profits in Marketing Farm Products	Nov.
An Examination of Beef and Pork Price Spread Computation Procedures	Nov.

Transportation

A Comparison of Small Truck Carriers	May
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Miscellaneous

Marketing Cotton--From Farmer to Consumer	Feb.
Product Diversification by Food Manufacturing Firms	May
Reader Survey: The Marketing and Transportation Situation	May
Consumer Income and Expenditures	Aug.
Synthetic Substitutes in Agricultural Markets	Aug.
Number and Size of Establishments Manufacturing Farm-Originated Foods	Aug.
Recent Developments in Marketing	Nov.
Outlook for Marketing Services and Implications for Food Prices	Nov.

Table 15.--Farm food products: Retail cost, farm value of equivalent quantities sold by producers, byproduct allowance, farm-retail spread, and farmer's share of retail cost, October-December, 1967

Product 1/	Farm product equivalent	Retail unit	Retail cost	Gross farm value	Byproduct allowance	Net farm value 2/	Farm-retail spread	Farmer's share
			Dollars	Dollars	Dollars	Dollars	Dollars	Percent
Market basket			1,083.67	---	---	405.75	677.92	37
Meat products			320.42	---	---	160.98	159.44	50
Dairy products			197.67	---	---	94.23	103.44	48
Poultry and eggs		Average quantities purchased	79.96	---	---	39.86	40.10	50
Bakery and cereal products 3/	Farm produce equivalent	to products bought						
All ingredients	per urban wage-	per urban wage-	168.90	---	---	33.49	135.41	20
Grain	earner and clerical-	earner and clerical-	---	31.53	5.54	25.99	---	15
All fruits and vegetables	worker household in	worker household in	229.68	---	---	57.92	171.76	25
Fresh fruits and vegetables	1960-61	1960-61	111.16	---	---	35.74	75.42	32
Fresh fruits			45.41	---	---	15.15	30.26	33
Fresh vegetables			65.75	---	---	20.59	45.16	31
Processed fruits and vegetables			118.52	---	---	22.18	96.34	19
Fats and oils			38.38	---	---	10.05	28.33	26
Miscellaneous products			48.66	---	---	9.22	39.44	19
			Cents	Cents	Cents	Cents	Cents	Percent
Beef, Choice grade	2.25 lb. Choice grade cattle	Pound	86.0	54.5	4.8	49.7	36.3	58
Lamb, Choice grade	2.37 lb. lamb	Pound	89.9	51.9	5.3	46.6	43.3	52
Pork	2.00 lb. hogs	Pound	66.5	36.1	4.2	31.9	34.6	48
Butter	Cream and whole milk	Pound	83.2	---	---	60.8	22.4	73
Cheese, American process	Milk for American cheese	1/2 pound	43.5	---	---	18.6	24.9	43
Ice cream	Cream, milk, and sugar	gallon	80.2	---	---	25.6	54.6	32
Milk, evaporated	Milk for evaporating	14 1/2-ounce can	16.8	---	---	7.8	9.0	46
Milk, fresh								
Home delivered	4.39 lb. Class I milk	1/2 gallon	58.3	---	---	26.0	32.3	45
Sold in stores	4.39 lb. Class I milk	1/2 gallon	52.4	---	---	26.0	26.4	50
Chickens, frying, ready-to-cook	1.37 lb. broiler	Pound	37.2	---	---	16.1	21.1	43
Eggs, Grade A large	1.03 dozen	Dozen	48.4	---	---	27.8	20.6	57
Bread, white								
All ingredients	Wheat and other ingredients	Pound	22.2	---	---	3.3	18.9	15
Wheat	1.867 lb. wheat	Pound	---	3.1	---	2.6	---	12
Bread, whole or cracked wheat	1.705 lb. wheat	Pound	29.8	---	---	3.2	26.6	11
Cookies, sandwich	1.528 lb. wheat	Pound	51.6	---	---	4.4	47.2	9
Corn flakes	2.87 lb. yellow corn	12 ounces	31.3	4/5.4	4/3.1	4/2.3	29.0	7
Flour, white	6.8 lb. wheat	5 pounds	59.1	24.6	3.3	21.3	37.8	36
Apples	1.04 lb. apples	Pound	18.7	---	---	7.0	11.7	37
Grapefruit	1.03 grapefruit	Each	14.2	---	---	3.3	10.9	23
Lemons	1.04 lb. lemons	Pound	26.5	---	---	8.2	18.3	31
Oranges	1.03 doz. oranges	Dozen	86.6	---	---	21.1	65.5	24
Cabbage	1.08 lb. cabbage	Pound	9.8	---	---	2.6	7.2	27
Carrots	1.03 lb. carrots	Pound	18.4	---	---	8.3	10.1	45
Celery	1.08 lb. celery	Pound	17.3	---	---	5.5	11.8	32
Cucumbers	1.09 lb. cucumbers	Pound	21.1	---	---	6.3	14.8	30
Lettuce	1.88 lb. lettuce	Head	27.3	---	---	9.3	18.0	34
Onions	1.06 lb. onions	Pound	12.8	---	---	4.3	8.5	34
Peppers, green	1.09 lb. peppers	Pound	37.1	---	---	15.4	21.7	42
Potatoes	10.42 lb. potatoes	10 pounds	69.5	---	---	17.5	52.0	25
Spinach .....	.71 lb. spinach	10 ounces	30.1	---	---	7.1	23.0	24
Tomatoes	1.18 lb. tomatoes	Pound	31.7	---	---	9.7	22.0	31
Peaches, canned	1.60 lb. Calif. cling peaches	No. 2 1/2 can	32.9	---	---	6.7	26.2	20
Pears, canned	1.85 lb. pears for canning	No. 2 1/2 can	50.4	---	---	13.9	36.5	28
Beets, canned	1.24 lb. beets for canning	No. 303 can	18.1	---	---	1.3	16.8	7
Corn, canned	2.495 lb. sweet corn	No. 303 can	23.6	---	---	2.9	20.7	12
Peas, canned .....	.69 lb. peas for canning	No. 303 can	25.0	---	---	3.8	21.2	15
Tomatoes, canned	1.84 lb. tomatoes for canning	No. 303 can	20.2	---	---	3.9	16.3	19
Orange juice, concentrate, frozen ..	3.10 lb. oranges	6-ounce can	18.3	---	---	4.5	13.8	25
French fried potatoes, frozen	1.38 lb. potatoes	9 ounces	15.0	---	---	2.2	12.8	15
Peas, frozen .....	.70 lb. peas for freezing	10 ounces	20.5	---	---	3.7	16.8	18
Beans, navy	1.00 lb. Mich. dry beans	Pound	18.8	---	---	8.3	10.5	44
Margarine	Soybeans, cottonseed, and milk	Pound	28.1	---	---	7.0	21.1	25
Peanut butter	1.33 lb. peanuts	12-ounce jar	43.9	---	---	15.1	28.8	34
Salad and cooking oil	Soybeans, cottonseed, and corn	24-ounce bottle	53.4	---	---	11.6	41.8	22
Vegetable shortening	Soybeans and cottonseed	3 pounds	85.8	---	---	24.9	60.9	29
Sugar	Sugar beets and cane	5 pounds	60.9	24.8	1.5	5/23.3	5/37.6	5/38
Spaghetti with sauce, canned	Wheat, tomatoes, cheese, sugar	15 1/2-ounce can	16.6	---	---	2.2	14.4	13

1/ Product groups include more items than those listed in this table. For example, in addition to the products listed--Choice beef, lamb, and pork (major products except lard)--the meat products group includes lower grades of beef, the minor edible pork products, and veal.

2/ Gross farm value adjusted to exclude imputed values of byproducts obtained in processing.

3/ For the bakery products group and the individual wheat products, gross farm value, byproduct allowance, net farm value, and farmer's share are based on the market price of wheat received by farmers plus the cost of the marketing certificate to millers. This cost equals the value of the domestic marketing certificate received by farmers complying fully with the Wheat Program.

4/ Based on market price of corn received by farmers; no allowance made for price support payment received by farmers who comply with the Federal Feed Grain Program.

5/ Net farm value adjusted for Government payments to producers was 27.1 cents, farm-retail spread adjusted for Government processor tax was 35.0 cents, farmer's share of retail cost based on adjusted farm value was 44 percent.

Table 16.--Farm food products: Retail cost and farm value, October-December 1967, July-September 1967, October-December 1966, and 1957-59 average

Product 1/	Retail unit	Retail cost						Net farm value 2/					
		October-December 1967	July-September 1967	October-December 1966	1957-59 average	Percentage change: 1967 from 1966	Percentage change: Oct. - Dec. 1967	October-December 1967	July-September 1967	October-December 1966	1957-59 average	Percentage change: 1967 from 1966	Percentage change: Oct. - Dec. 1967
		Dollars	Dollars	Dollars	Dollars	Percent	Percent	Dollars	Dollars	Dollars	Dollars	Percent	Percent
		1967	1967	1966	1967	1967	1966	1967	1967	1966	1967	1967	1966
Market basket		1,083.67	1,092.85	1,096.72	982.65	-1	-1	405.75	3/426.27	3/425.63	387.87	-5	-5
Meat products		320.42	323.76	321.39	285.05	-1	4/	160.98	3/177.87	163.27	154.47	-10	-1
Dairy products		197.67	195.99	197.70	173.33	1	4/	94.23	3/93.27	3/94.93	77.85	1	-1
Poultry and eggs		79.96	81.79	92.17	93.02	-2	-13	39.86	3/43.21	3/52.62	56.28	-8	-24
Bakery and cereal products 5/		168.90	168.74	169.99	148.40	4/	-1	33.49	3/34.04	3/36.70	30.55	-2	-9
All ingredients		---	---	---	---	---	---	25.99	3/26.44	3/28.17	23.40	-2	-8
Grain		---	---	---	---	---	---	---	---	---	---	---	---
All fruits and vegetables		229.68	235.69	227.83	202.96	-3	1	57.92	3/58.38	3/57.33	50.05	-1	1
Fresh fruits and vegetables		111.16	119.88	110.27	91.15	-7	1	35.74	3/37.29	3/34.35	28.70	-4	4
Fresh fruits		45.41	49.12	44.30	36.26	-8	3	15.15	14.61	3/13.02	12.26	4	16
Fresh vegetables		65.75	70.76	65.97	54.89	-7	4/	20.59	3/22.68	3/21.33	16.44	-9	-3
Processed fruits and vegetables		118.52	115.81	117.56	111.81	2	1	22.18	3/21.09	3/22.98	21.35	5	-3
Fats and oils		38.38	38.51	39.77	37.56	4/	-3	10.05	10.51	3/11.81	11.19	-4	-15
Miscellaneous products		48.66	48.37	47.87	42.33	1	2	9.22	3/8.99	3/8.97	7.48	3	3
		Cents	Cents	Cents	Cents	Percent	Percent	Cents	Cents	Cents	Cents	Percent	Percent
Beef, Choice grade	Pound	86.0	84.9	83.5	78.1	1	3	49.7	51.4	47.1	48.3	-3	6
Lamb, Choice grade	Pound	89.9	89.7	85.2	70.5	4/	6	46.6	48.9	45.3	40.2	-5	3
Pork	Pound	66.5	69.4	69.9	60.0	-4	-5	31.9	38.1	35.5	31.0	-16	-10
Butter	Pound	83.2	82.8	85.9	73.2	4/	-3	60.8	60.9	3/62.2	52.6	4/	-2
Cheese, American process	1/2 pound	43.5	43.3	44.4	32.3	4/	-2	18.6	3/18.5	19.5	14.2	1	-5
Ice cream	1/2 gallon	80.2	80.9	82.1	84.2	-1	-2	25.6	25.5	3/26.4	23.4	4/	-3
Milk, evaporated	1 1/2-ounce can	16.8	16.8	16.8	14.5	0	0	7.8	7.9	8.0	6.2	-1	-2
Milk, fresh													
Home delivered	1/2 gallon	58.3	57.6	57.5	50.8	1	1	26.0	25.6	25.7	21.9	2	1
Sold in stores	1/2 gallon	52.4	51.6	51.7	46.6	2	1	26.0	25.6	25.7	21.9	2	1
Chickens, frying, ready-to-cook	Pound	37.2	38.8	38.6	43.5	-4	-4	16.1	18.4	17.7	24.4	-12	-9
Eggs, Grade A large	Dozen	48.4	48.4	62.7	56.2	0	-23	27.8	28.8	42.4	36.1	-3	-34
Bread, white													
All ingredients	Pound	22.2	22.1	22.7	18.5	4/	-2	3.3	3.4	3/3.6	3.0	-3	-8
Wheat	Pound	---	---	---	---	---	---	2.6	3/2.8	3/2.9	2.4	-7	-10
Bread, whole or cracked wheat	Pound	29.8	29.8	29.7	---	0	4/	3.2	3.2	3.5	---	0	-9
Cookies, sandwich	Pound	51.6	51.4	51.9	---	4/	-1	4.4	4.4	4.6	---	0	-4
Corn flakes	12 ounces	31.3	31.3	30.4	24.5	0	3	2.3	2.7	2.9	2.4	-15	-21
Flour, white	5 pounds	59.1	59.4	60.6	53.3	-1	-2	21.3	21.6	3/23.0	18.8	-1	-7
Apples	Pound	18.7	23.8	17.2	16.1	-21	9	7.0	6.8	3/5.8	4.7	3	21
Grapefruit	Each	14.2	16.0	14.9	10.7	-11	-5	3.3	4.3	2.3	2.7	-23	43
Lemons	Pound	26.5	23.7	24.6	18.4	12	8	8.2	7.6	6.6	4.2	8	24
Oranges	Dozen	86.6	78.2	87.4	66.0	11	-1	21.1	19.1	20.7	23.2	10	2
Cabbage	Pound	9.8	10.4	12.2	8.7	-6	-20	2.6	2.8	4.4	2.4	-7	-41
Carrots	Pound	18.4	16.5	15.0	15.3	12	23	8.3	5.9	4.9	3.7	41	69
Celery	Pound	17.3	17.8	15.0	15.3	-3	15	5.5	6.6	4.5	4.4	-17	22
Cucumbers	Pound	21.1	19.9	20.3	---	6	4	6.3	7.2	7.5	---	-12	-16
Lettuce	Head	29.7	29.7	27.1	22.6	-8	1	9.3	8.7	8.4	6.0	7	11
Onions	Pound	12.8	13.9	13.1	10.1	-8	-2	4.3	4.3	4.8	3.4	0	-10
Peppers, green	Pound	37.1	34.5	32.8	---	8	13	15.4	11.6	11.3	---	33	36
Potatoes	10 pounds	69.5	80.1	72.6	58.3	-13	-4	17.5	3/23.8	21.1	17.8	-26	-17
Spinach	10 ounces	30.1	30.9	29.4	---	-3	2	7.1	8.1	6.3	---	-12	13
Tomatoes	Pound	31.7	36.4	34.1	30.1	-13	-7	9.7	14.4	13.0	10.6	-33	-25
Peaches, canned	No. 2 1/2 can	32.9	31.9	31.8	34.3	3	3	6.7	3/6.1	3/5.5	6.1	10	22
Pears, canned	No. 2 1/2 can	50.4	45.3	44.6	---	11	13	13.9	10.5	7.2	---	32	93
Beets, canned	No. 303 can	18.1	17.9	17.2	---	1	5	1.3	3/1.3	1.2	---	0	8
Corn, canned	No. 303 can	23.6	23.2	22.3	17.8	2	6	2.9	2.8	2.7	2.4	4	7
Peas, canned	No. 303 can	25.0	24.9	24.5	21.0	4/	2	3.8	3.8	3.7	3.1	0	3
Tomatoes, canned	No. 303 can	20.2	19.7	18.2	15.6	3	11	3.9	3.4	3.3	2.3	15	18
Orange juice, concentrate, frozen	6-ounce can	18.3	17.4	22.7	23.4	5	-19	4.5	4.5	8.6	8.2	0	-48
French fried potatoes, frozen	9 ounces	15.0	15.1	15.2	---	-1	-1	2.2	2.3	3/2.6	---	-4	-15
Peas, frozen	10 ounces	20.5	20.5	20.5	19.9	0	0	3.7	3/3.6	3/3.4	3.2	3	9
Beans, navy	Pound	18.8	18.0	19.0	16.3	4	-1	8.3	7.3	6.1	6.9	14	36
Margarine	Pound	28.1	28.0	29.0	27.4	4/	-3	7.0	7.4	8.4	7.8	-5	-17
Peanut butter	12-ounce jar	43.9	44.0	44.5	41.4	4/	-1	15.1	15.1	14.9	14.1	0	1
Salad and cooking oil	24-ounce bottle	53.4	53.8	54.9	---	-1	-3	11.6	3/12.2	3/14.2	---	-5	-18
Vegetable shortening	3 pounds	85.8	87.1	91.5	90.4	-1	-6	24.9	26.2	30.2	28.2	-5	-18
Sugar	5 pounds	60.9	60.7	60.3	54.5	4/	1	23.3	3/22.9	3/22.3	20.2	2	4
Spaghetti with sauce, canned	15 1/2-ounce can	16.6	16.4	16.1	---	1	3	2.2	2.1	2.1	---	5	5

1/ Product groups include more items than those listed in this table. For example, in addition to the products listed--Choice beef, lamb, and pork (major products except lard)--the meat products group includes lower grades of beef, the minor edible pork products, and veal.

2/ Gross farm value adjusted to exclude imputed value of byproducts obtained in processing.

3/ Most retail cost figures for July-September 1967, October-December 1966 have been revised; figures in other columns revised as indicated.

4/ Less than 0.5 percent.

5/ For the bakery products group and the individual wheat products, the net farm value is based on the market price of wheat received by farmers plus the cost of the marketing certificate to millers. This cost equals the value of the domestic marketing certificate received by farmers complying fully with the Wheat Program.

Table 17.--Farm food products: Farm-retail spread and farmer's share of the retail cost, October-December 1967, July-September 1967, and October-December 1966, and 1957-59 average

Product 1/	Retail unit	Farm-retail spread 2/				Farmer's share					
		October-December 1967	July-September 1967	October-December 1966	1957-59 average	Percentage change : October-December 1967 from : July-September 1967	Percentage change : October-December 1967 from : October-December 1966	October-December 1967	July-September 1967	October-December 1966	1957-59 average
		Dollars	Dollars	Dollars	Dollars	Percent	Percent	Percent	Percent	Percent	Percent
Market basket		677.92	666.58	671.09	594.78	2	1	37	39	39	39
Meat products		159.44	145.89	158.12	130.58	9	1	50	55	51	54
Dairy products	Average quantities purchased per urban wage-earner and clerical-worker household	103.44	102.72	102.77	95.48	1	1	48	48	48	45
Poultry and eggs		40.10	38.58	39.55	36.74	4	1	50	53	57	61
Bakery and cereal products 4/											
All ingredients		135.41	134.70	133.29	117.85	1	2	20	3/20	3/22	21
Grain		---	---	---	---	--	--	15	16	17	16
All fruits and vegetables		171.76	177.31	170.50	152.91	-3	1	25	25	25	25
Fresh fruits and vegetables ..		75.42	82.59	75.92	62.45	-9	-1	32	31	31	31
Fresh fruits		30.26	34.51	31.28	24.00	-12	-3	33	30	29	34
Fresh vegetables	1960-61	45.16	48.08	44.64	38.45	-6	1	31	32	32	30
Processed fruits and vegetables		96.34	94.72	94.58	90.46	2	2	19	18	20	19
Fats and oils		28.33	28.00	27.96	26.37	1	1	26	27	3/30	30
Miscellaneous products		39.44	39.38	38.90	34.85	2/	1	19	3/19	3/19	18
		Cents	Cents	Cents	Cents	Percent	Percent	Percent	Percent	Percent	Percent
Beef, Choice grade	Pound	36.3	33.5	36.4	29.8	8	5/	58	61	56	62
Lamb, Choice grade	Pound	43.3	40.8	39.9	29.8	6	9	52	3/55	53	57
Pork	Pound	34.6	31.3	34.4	29.5	11	1	48	55	51	51
Butter	Pound	22.4	21.9	23.7	20.6	2	-5	73	74	3/72	72
Cheese, American process	1/2 pound	24.9	24.8	24.9	18.1	2/	0	43	43	44	44
Ice cream	1/2 gallon	54.6	55.4	55.7	60.8	-1	-2	32	3/32	3/32	28
Milk, evaporated	14 1/2-ounce can	9.0	8.9	8.8	8.3	1	2	46	47	48	43
Milk, fresh											
Home delivered	1/2 gallon	32.3	32.0	31.8	28.9	1	2	45	3/44	45	43
Sold in stores	1/2 gallon	26.4	26.0	26.0	24.7	2	2	50	50	50	47
Chickens, frying, ready-to-cook ..	Pound	21.1	20.4	20.9	19.1	3	1	43	47	46	56
Eggs, Grade A large	Dozen	20.6	19.6	20.3	20.1	5	1	57	60	3/68	64
Bread, white											
All ingredients	Pound	18.9	18.7	19.1	15.5	1	-1	15	15	16	16
Wheat	Pound	---	---	---	---	--	--	12	3/13	13	13
Bread, whole or cracked wheat ..	Pound	26.6	26.6	26.2	---	0	2	11	11	12	--
Cookies, sandwich	Pound	47.2	47.0	47.3	---	2/	5/	9	9	9	--
Corn flakes	12 ounces	29.0	28.6	27.5	22.1	1	5	7	9	3/10	10
Flour, white	5 pounds	37.8	37.8	37.6	34.5	0	1	36	36	38	35
Apples	Pound	11.7	17.0	11.4	11.4	-31	3	37	29	3/34	29
Grapefruit	Each	10.9	11.7	12.6	8.0	-7	-13	23	27	15	25
Lemons	Pound	18.3	16.1	18.0	14.2	14	2	31	3/32	27	23
Oranges	Dozen	65.5	59.1	66.7	42.8	11	-2	24	24	3/24	35
Cabbage	Pound	7.2	7.6	7.8	6.3	-5	-8	27	27	36	28
Carrots	Pound	10.1	10.6	10.1	10.8	-5	0	45	3/36	3/33	26
Celery	Pound	11.8	11.2	10.5	10.9	5	12	32	37	30	29
Cucumbers	Pound	14.8	12.7	12.8	---	17	16	30	3/36	37	--
Lettuce	Head	18.0	21.0	18.7	16.6	-14	-4	34	29	31	27
Onions	Pound	8.5	9.6	8.3	6.7	-11	2	34	31	37	34
Peppers, green	Pound	21.7	22.9	21.5	---	-5	1	42	3/34	34	--
Potatoes	10 pounds	52.0	56.2	51.5	40.5	-7	1	25	30	29	31
Spinach	10 ounces	23.0	22.8	23.1	---	1	2/	24	26	21	--
Tomatoes	Pound	22.0	22.0	21.1	19.5	0	4	31	3/40	38	35
Peaches, canned	No. 2 1/2 can	26.2	25.8	26.3	28.2	2	5/	20	3/19	17	18
Pears, canned	No. 2 1/2 can	36.5	34.8	37.4	---	5	-2	28	23	16	--
Beets, canned	No. 303 can	16.8	16.6	16.0	---	1	5	7	7	7	--
Corn, canned	No. 303 can	20.7	20.4	19.6	15.4	1	6	12	12	12	13
Pears, canned	No. 303 can	21.2	21.1	20.8	17.9	2/	2	15	15	15	15
Tomatoes, canned	No. 303 can	16.3	16.3	14.9	13.3	0	9	19	17	18	15
Orange juice, concentrate, frozen	6-ounce can	13.8	12.9	14.1	15.2	7	-2	25	26	3/38	35
French fried potatoes, frozen ..	9 ounces	12.8	12.8	12.6	---	0	2	15	15	3/17	--
Peas, frozen	10 ounces	16.8	16.9	17.1	16.7	-1	-2	18	3/18	17	16
Beans, navy	Pound	10.5	10.7	12.9	9.4	-2	-19	44	3/41	32	42
Margarine	Pound	21.1	20.6	20.6	19.6	2	2	25	26	3/29	28
Peanut butter	12-ounce jar	28.8	28.9	29.6	27.3	2/	-3	34	34	33	34
Salad and cooking oil	24-ounce bottle	41.8	41.6	40.7	---	2/	3	22	3/23	3/26	--
Vegetable shortening	3 pounds	60.9	60.9	61.3	62.2	0	-1	29	30	33	31
Sugar	5 pounds	37.6	37.8	38.0	34.3	-1	-1	38	3/38	3/37	37
Spaghetti with sauce, canned	15 1/2-ounce can	14.4	14.3	14.0	---	1	3	13	13	13	--

1/ Product groups include more items than those listed in this table. For example, in addition to the products listed--Choice beef, lamb, and pork (major products except lard)--the meat products group includes lower grades of beef, the minor edible pork products, and veal.

2/ The farm-retail spread is the difference between the retail cost and the net farm value shown in table on opposite page.

3/ Most farm-retail spread figures for July-September 1967, October-December 1966, have been revised; figures in other columns revised as indicated.

4/ For the bakery products group and the individual wheat products, the farmer's share is based on the market price of wheat received by farmers plus the cost of the marketing certificate to millers. This cost equals the value of the domestic marketing certificate received by farmers complying fully with the Wheat Program.

5/ Less than 0.5 percent.

Table 18.--Farm food products: Retail cost, farm value of equivalent quantities sold by producers, byproduct allowance, farm-retail spread, and farmer's share of retail cost, annual 1966

Product 1/	Farm product equivalent	Retail unit	Retail cost	Gross farm value	Byproduct allowance	Net farm value 2/	Farm-retail spread	Farmer's share
			Dollars	Dollars	Dollars	Dollars	Dollars	Percent
Market basket			1,094.72	---	---	443.25	651.47	40
Meat products			329.65	---	---	180.34	149.31	55
Dairy products			189.44	---	---	89.68	99.76	47
Poultry and eggs		Average quantities purchased per urban wage-earner and clerical-worker household in 1960-61	92.47	---	---	53.92	38.55	58
Bakery and cereal products 3/	Farm produce equivalent to products bought per urban wage-earner and clerical-worker household in 1960-61		165.70	---	---	36.45	129.25	22
All ingredients			---	34.00	5.91	28.09	---	17
Grain			231.37	---	---	61.56	169.81	27
All fruits and vegetables			113.64	---	---	37.58	76.06	33
Fresh fruits and vegetables			44.79	---	---	14.32	30.47	32
Fresh fruits			68.85	---	---	23.26	45.59	34
Fresh vegetables			117.73	---	---	23.98	93.75	20
Processed fruits and vegetables			38.70	---	---	12.43	26.27	32
Fats and oils			47.39	---	---	8.87	38.52	19
Miscellaneous products								
			Cents	Cents	Cents	Cents	Cents	Percent
Beef, Choice grade	2.25 lb. Choice grade cattle	Pound	84.3	55.5	5.9	49.6	34.7	59
Lamb, Choice grade	2.35 lb. lamb	Pound	85.6	55.5	8.4	47.1	38.5	55
Pork	2.00 lb. hogs	Pound	73.4	47.6	6.4	41.2	32.2	56
Butter	Cream and whole milk	Pound	81.2	---	---	61.0	20.2	75
Cheese, American process	Milk for American cheese	$\frac{1}{2}$ pound	41.9	---	---	18.6	23.3	44
Ice cream	Cream, milk, and sugar	$\frac{1}{2}$ gallon	79.5	---	---	25.5	54.0	32
Milk, evaporated	Milk for evaporating	$1\frac{1}{2}$ -ounce can	16.0	---	---	7.7	8.3	48
Milk, fresh								
Home delivered	4.39 lb. Class I milk	$\frac{1}{2}$ gallon	55.5	---	---	23.9	31.6	43
Sold in stores	4.39 lb. Class I milk	$\frac{1}{2}$ gallon	49.7	---	---	23.9	25.8	48
Chickens, frying, ready-to-cook	1.37 lb. broiler	Pound	41.2	---	---	21.0	20.2	51
Eggs, Grade A large	1.03 dozen	Dozen	59.3	---	---	39.2	20.1	66
Bread, white								
All ingredients	Wheat and other ingredients	Pound	22.0	---	---	3.6	18.4	16
Wheat .....	.867 lb. wheat	Pound	---	3.3	.4	2.9	---	13
Bread, whole or cracked wheat .....	.708 lb. wheat	Pound	28.7	---	---	3.4	25.3	12
Cookies, sandwich .....	.528 lb. wheat	Pound	50.8	---	---	4.6	46.2	9
Corn flakes	2.87 lb. yellow corn	12 ounces	29.7	4/6.6	4/3.8	4/2.8	26.9	9
Flour, white	6.8 lb. wheat	5 pounds	58.7	26.2	3.2	23.0	35.7	39
Apples	1.04 lb. apples	Pound	19.5	---	---	6.7	12.8	34
Grapefruit	1.03 grapefruit	Each	14.8	---	---	3.4	11.4	23
Lemons	1.04 lb. lemons	Pound	23.7	---	---	6.1	17.6	26
Oranges	1.03 doz. oranges	Dozen	79.3	---	---	21.0	58.3	26
Cabbage	1.08 lb. cabbage	Pound	12.3	---	---	4.0	8.3	33
Carrots	1.03 lb. carrots	Pound	16.4	---	---	5.8	10.6	35
Celery	1.08 lb. celery	Pound	16.7	---	---	5.8	10.9	35
Cucumbers	1.09 lb. cucumbers	Pound	25.0	---	---	8.4	16.6	34
Lettuce	1.88 lb. lettuce	Head	27.8	---	---	10.2	17.6	37
Onions	1.06 lb. onions	Pound	12.9	---	---	5.0	7.9	39
Peppers, green	1.09 lb. peppers	Pound	37.1	---	---	13.7	23.4	37
Potatoes	10.42 lb. potatoes	10 pounds	74.6	---	---	22.4	52.2	30
Spinach .....	.71 lb. spinach	10 ounces	29.5	---	---	6.6	22.9	22
Tomatoes	1.18 lb. tomatoes	Pound	34.8	---	---	12.6	22.2	36
Peaches, canned	1.60 lb. Calif. cling peaches	No. 2 $\frac{1}{2}$ can	33.7	---	---	5.5	28.2	16
Pears, canned	1.85 lb. pears for canning	No. 2 $\frac{1}{2}$ can	48.0	---	---	10.4	37.6	22
Beets, canned	1.24 lb. beets for canning	No. 303 can	17.1	---	---	1.1	16.0	6
Corn, canned	2.495 lb. sweet corn	No. 303 can	21.9	---	---	2.7	19.2	12
Peas, canned .....	.69 lb. peas for canning	No. 303 can	24.1	---	---	3.6	20.5	15
Tomatoes, canned	1.84 lb. tomatoes for canning	No. 303 can	17.7	---	---	3.4	14.3	19
Orange juice, concentrate, frozen	3.10 lb. oranges	6-ounce can	22.1	---	---	9.0	13.1	41
French fried potatoes, frozen	1.38 lb. potatoes	9 ounces	15.4	---	---	2.6	12.8	17
Peas, frozen .....	.70 lb. peas for freezing	10 ounces	20.0	---	---	3.5	16.5	18
Beans, navy	1.00 lb. Mich. dry beans	Pound	19.6	---	---	7.3	12.3	37
Margarine	Soybeans, cottonseed, and milk	Pound	28.3	---	---	9.0	19.3	32
Peanut butter	1.33 lb. peanuts	12-ounce jar	44.7	---	---	15.2	29.5	34
Salad and cooking oil	Soybeans, cottonseed, and corn	24-ounce bottle	52.4	---	---	14.8	37.6	28
Vegetable shortening	Soybeans and cottonseed	3 pounds	89.0	---	---	31.9	57.1	36
Sugar	Sugar beets and cane	5 pounds	59.6	23.3	1.5	5/21.8	5/37.8	5/37
Spaghetti with sauce, canned	Wheat, tomatoes, cheese, sugar	15 $\frac{1}{2}$ -ounce can	15.8	---	---	2.1	13.7	13

1/ Product groups include more items than those listed in this table. For example, in addition to the products listed--Choice beef, lamb, and pork (major products except lard)--the meat products group includes lower grades of beef, the minor edible pork products, and veal.

2/ Gross farm value adjusted to exclude imputed values of byproducts obtained in processing.

3/ For the bakery products group and the individual wheat products, gross farm value, byproduct allowance, net farm value, and farmer's share are based on the market price of wheat received by farmers plus the cost of the marketing certificate to millers. This cost equals the value of the domestic marketing certificate received by farmers complying fully with the Wheat Program.

4/ Based on market price of corn received by farmers; no allowance made for price support payment received by farmers who comply with the Federal Feed Grain Program.

5/ Net farm value adjusted for Government payments to producers was 25.6 cents, farm-retail spread adjusted for Government processor tax was 35.1 cents, and farmer's share of retail cost based on adjusted farm value was 43 percent.

Table 19.--Farm food products: Retail cost, farm value of equivalent quantities sold by producers, byproduct allowance, farm-retail spread, and farmer's share of retail cost, annual 1967

Product 1/	Farm product equivalent	Retail unit	Retail cost	Gross farm value	Byproduct allowance	Net farm value 2/	Farm-retail spread	Farmer's share
			Dollars	Dollars	Dollars	Dollars	Dollars	Percent
Market basket			1,080.65	---	---	413.48	667.17	38
Meat products			317.23	---	---	165.43	151.80	52
Dairy products			196.27	---	---	93.17	103.10	47
Poultry and eggs		Average quantities purchased per urban wage-earner and clerical-worker household in 1960-61	81.55	---	---	43.24	38.31	53
Bakery and cereal products 3/	Farm produce equivalent to products bought per urban wage-earner and clerical-worker household in 1960-61							
All ingredients			169.05	32.82	5.69	34.98	134.07	21
Grain			---	---	---	27.13	---	16
All fruits and vegetables			229.48	---	---	56.64	172.84	25
Fresh fruits and vegetables			113.28	---	---	35.55	77.73	31
Fresh fruits			44.76	---	---	13.61	31.15	30
Fresh vegetables			68.52	---	---	21.94	46.58	32
Processed fruits and vegetables			116.20	---	---	21.09	95.11	18
Fats and oils			38.79	---	---	10.95	27.84	28
Miscellaneous products			48.28	---	---	9.07	39.21	19
			Cents	Cents	Cents	Cents	Cents	Percent
Beef, Choice grade	2.25 lb. Choice grade cattle	Pound	84.1	54.3	5.0	49.3	34.8	59
Lamb, Choice grade	2.35 lb. lamb	Pound	87.1	52.4	5.7	46.7	40.4	54
Pork	2.00 lb. hogs	Pound	67.0	39.0	4.8	34.2	32.8	51
Butter	Cream and whole milk	Pound	83.1	---	---	60.7	22.4	73
Cheese, American process	Milk for American cheese	$\frac{1}{4}$ pound	43.6	---	---	18.6	25.0	43
Ice cream	Cream, milk, and sugar	$\frac{1}{4}$ gallon	81.0	---	---	25.6	55.4	32
Milk, evaporated	Milk for evaporating	$1\frac{1}{2}$ -ounce can	16.9	---	---	7.9	9.0	47
Milk, fresh								
Home delivered	4.39 lb. Class I milk	$\frac{1}{2}$ gallon	57.5	---	---	25.5	32.0	44
Sold in stores	4.39 lb. Class I milk	$\frac{1}{2}$ gallon	51.6	---	---	25.5	26.1	49
Chickens, frying, ready-to-cook	1.37 lb. broiler	Pound	38.1	---	---	18.2	19.9	48
Eggs, Grade A large	1.03 dozen	Dozen	49.2	---	---	29.1	20.1	59
Bread, white								
All ingredients	Wheat and other ingredients	Pound	22.2	---	---	3.4	18.8	15
Wheat .....	.867 lb. wheat	Pound	---	3.2	.4	2.8	---	13
Bread, whole or cracked wheat .....	.708 lb. wheat	Pound	29.7	---	---	3.3	26.4	11
Cookies, sandwich .....	.528 lb. wheat	Pound	51.5	---	---	4.5	47.0	9
Corn flakes	2.87 lb. yellow corn	12 ounces	31.3	$\frac{4}{6}$ 2	$\frac{4}{3}$ 5	$\frac{4}{2}$ 7	28.6	9
Flour, white	6.8 lb. wheat	5 pounds	59.6	25.3	3.2	22.1	37.5	37
Apples	1.04 lb. apples	Pound	20.5	---	---	6.9	13.6	34
Grapefruit	1.03 grapefruit	Each	13.4	---	---	2.8	10.6	21
Lemons	1.04 lb. lemons	Pound	24.5	---	---	7.2	17.3	29
Oranges	1.03 doz. oranges	Dozen	76.6	---	---	16.5	60.1	22
Cabbage	1.08 lb. cabbage	Pound	11.1	---	---	3.2	7.9	29
Carrots	1.03 lb. carrots	Pound	16.2	---	---	5.9	10.3	36
Celery	1.08 lb. celery	Pound	16.4	---	---	5.4	11.0	33
Cucumbers	1.09 lb. cucumbers	Pound	23.8	---	---	8.8	15.0	37
Lettuce	1.88 lb. lettuce	Head	27.7	---	---	9.3	18.4	34
Onions	1.06 lb. onions	Pound	13.7	---	---	4.8	8.9	35
Peppers, green	1.09 lb. peppers	Pound	37.5	---	---	14.0	23.5	37
Potatoes	10.42 lb. potatoes	10 pounds	74.4	---	---	21.0	53.4	28
Spinach .....	.71 lb. spinach	10 ounces	30.2	---	---	7.4	22.8	25
Tomatoes	1.18 lb. tomatoes	Pound	35.2	---	---	11.8	23.4	34
Peaches, canned	1.60 lb. Calif. cling peaches	No. 2 $\frac{1}{2}$ can	31.8	---	---	6.0	25.8	19
Pears, canned	1.85 lb. pears for canning	No. 2 $\frac{1}{2}$ can	45.4	---	---	9.7	35.7	21
Beets, canned	1.24 lb. beets for canning	No. 303 can	17.8	---	---	1.2	16.6	7
Corn, canned	2.495 lb. sweet corn	No. 303 can	23.0	---	---	2.8	20.2	12
Peas, canned .....	.69 lb. peas for canning	No. 303 can	24.9	---	---	3.8	21.1	15
Tomatoes, canned	1.84 lb. tomatoes for canning	No. 303 can	19.5	---	---	3.5	16.0	18
Orange juice, concentrate, frozen ..	3.20 lb. oranges	6-ounce can	18.3	---	---	4.9	13.4	27
French fried potatoes, frozen	1.38 lb. potatoes	9 ounces	15.0	---	---	2.3	12.7	15
Peas, frozen .....	.70 lb. peas for freezing	10 ounces	20.5	---	---	3.5	17.0	17
Beans, navy	1.00 lb. Mich. dry beans	Pound	18.2	---	---	7.0	11.2	38
Margarine	Soybeans, cottonseed, and milk	Pound	28.3	---	---	7.7	20.6	27
Peanut butter	1.33 lb. peanuts	12-ounce jar	44.1	---	---	15.1	29.0	34
Salad and cooking oil	Soybeans, cottonseed, and corn	24-ounce bottle	54.2	---	---	12.8	41.4	24
Vegetable shortening	Soybeans and cottonseed	3 pounds	87.5	---	---	27.6	59.9	32
Sugar	Sugar beets and cane	5 pounds	60.6	24.5	1.5	5/23.0	5/37.6	5/38
Spaghetti with sauce, canned	Wheat, tomatoes, cheese, sugar	15 $\frac{1}{2}$ -ounce can	16.4	---	---	2.1	14.3	13

1/ Product groups include more items than those listed in this table. For example, in addition to the products listed--Choice beef, lamb, and pork (major products except lard)--the meat products group includes lower grades of beef, the minor edible pork products, and veal.

2/ Gross farm value adjusted to exclude imputed values of byproducts obtained in processing.

3/ For bakery products group and the individual wheat products, gross farm value, byproduct allowance, net farm value, and farmer's share are based on the market price of wheat received by farmers plus the cost of the marketing certificate to millers. This cost equals the value of the domestic marketing certificate received by farmers complying fully with the Wheat Program.

4/ Based on market price of corn received by farmers; no allowance made for price support payment received by farmers who comply with the Federal Feed Grain Program.

5/ Net farm value adjusted for Government payments to producers was 26.8 cents, farm-retail spread adjusted for Government processor tax was 34.9 cents, farmer's share of retail cost based on adjusted farm value was 44 percent.

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